STEREO CASSETTE DECK

# KX-3050/5050

# SERVICE MANUAL

KENWOOD

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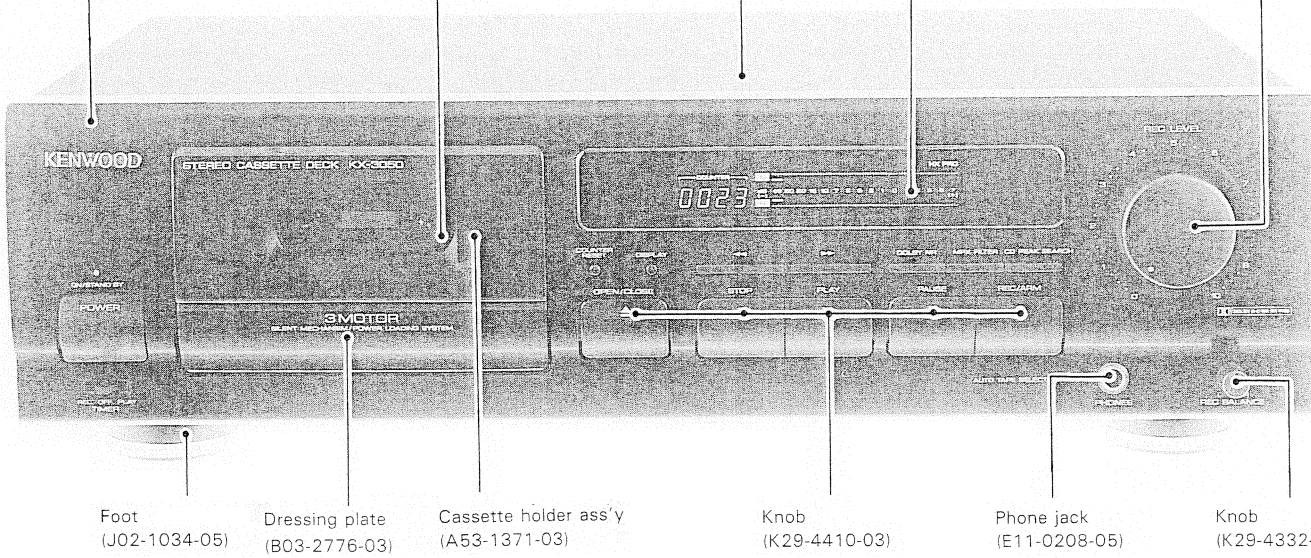
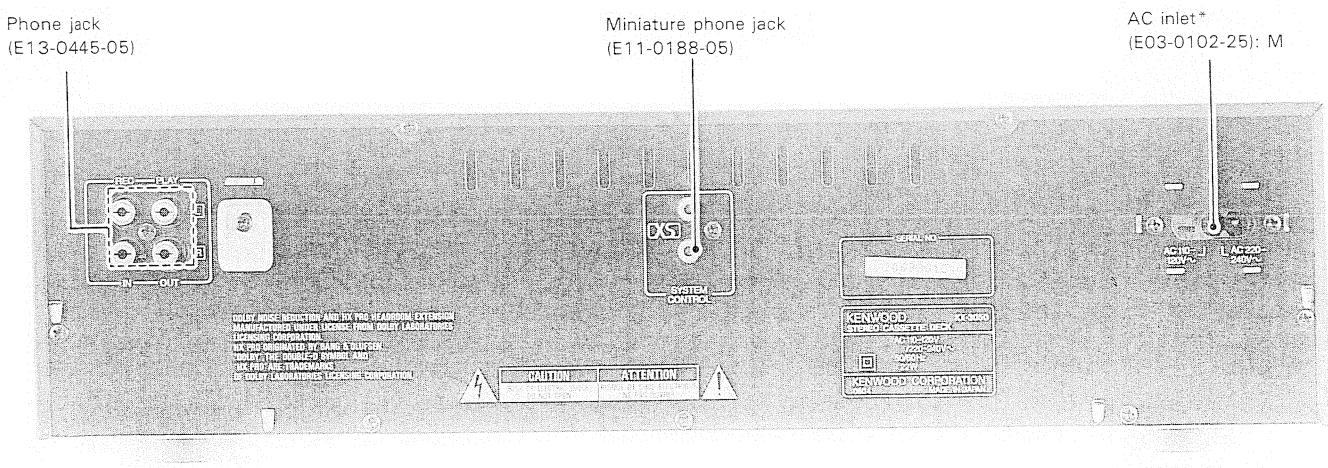
## KX-3050




Refer to parts list on page 49.

Photo is KX-3030M

# KX-3050/5050

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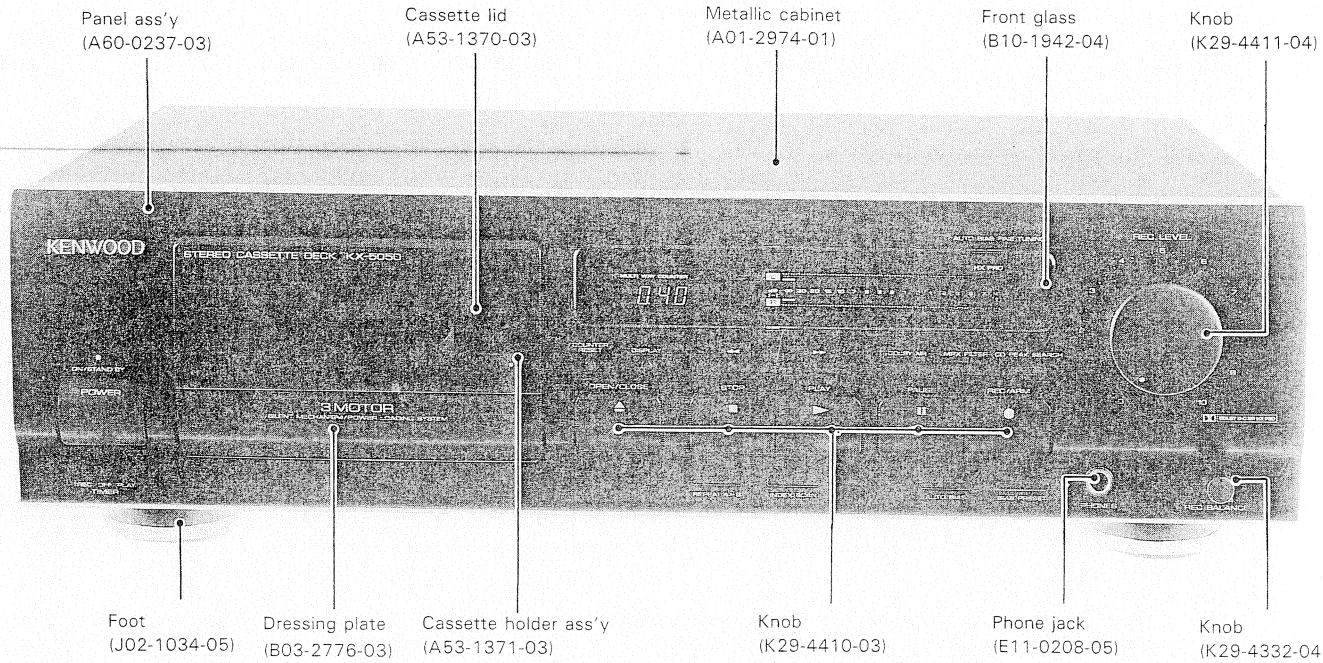
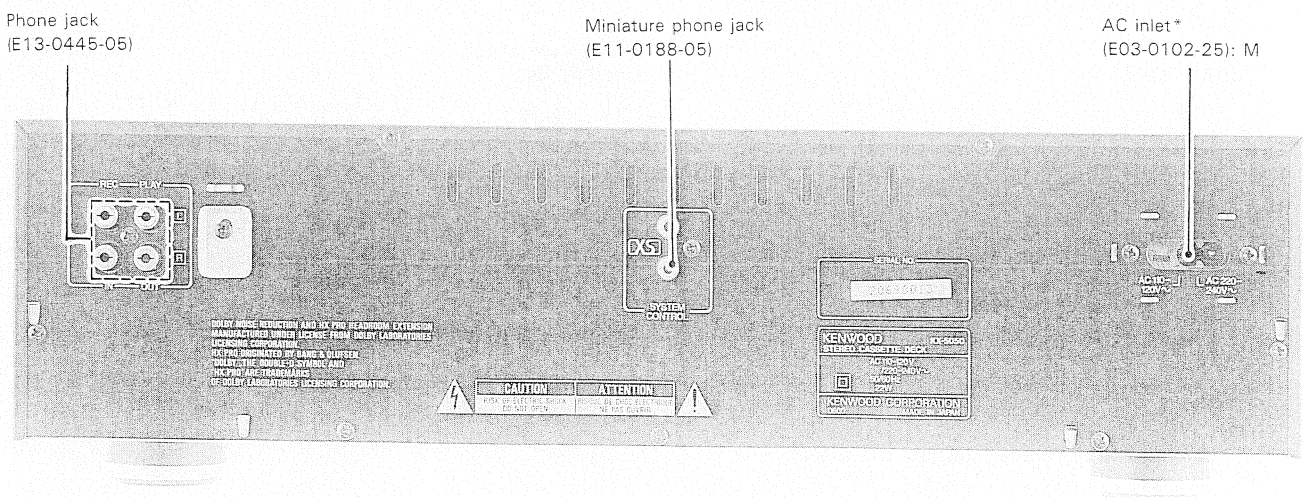
### KX-5050

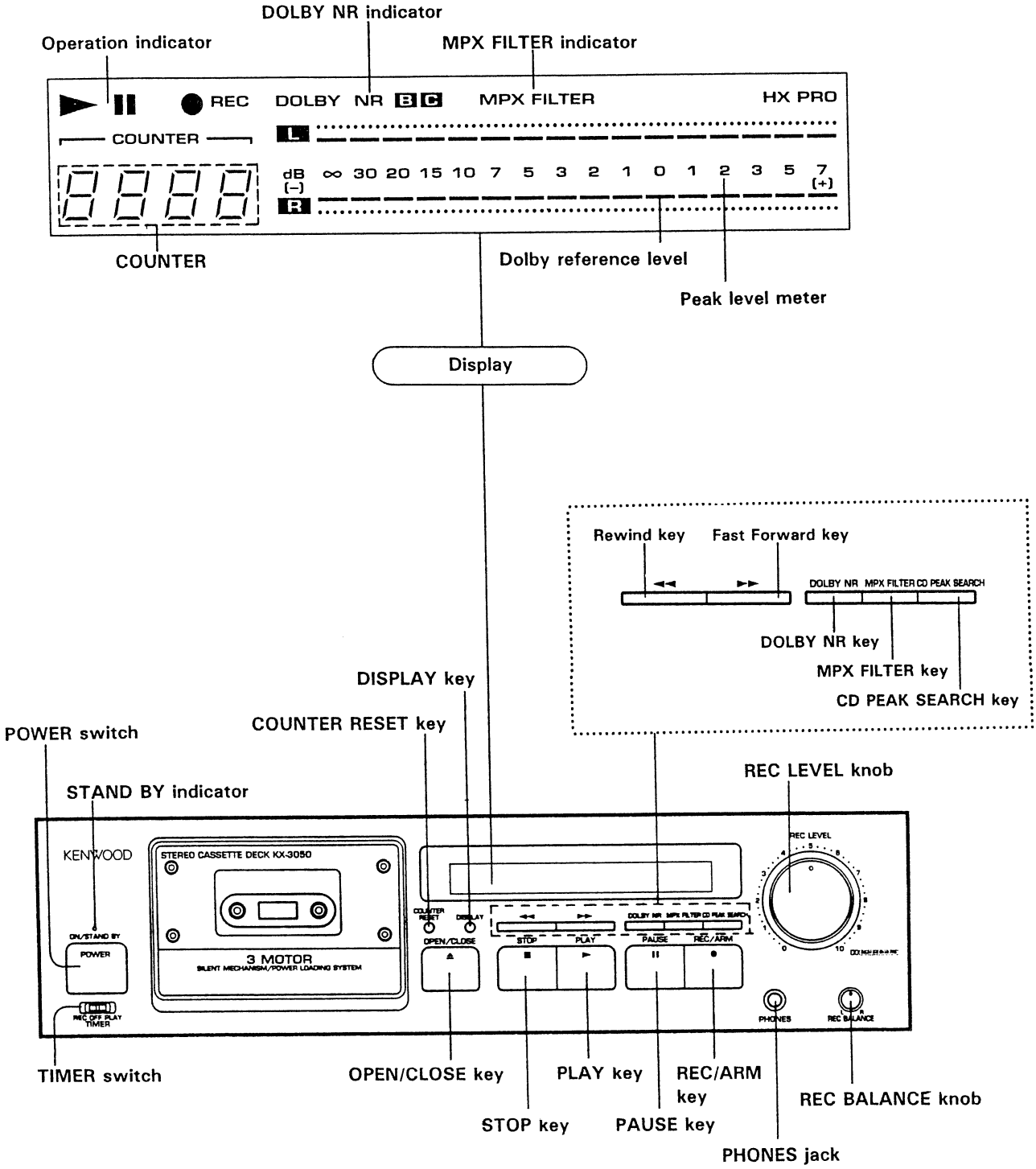



* Refer to parts list on page 49.

Photo is KX-3030M

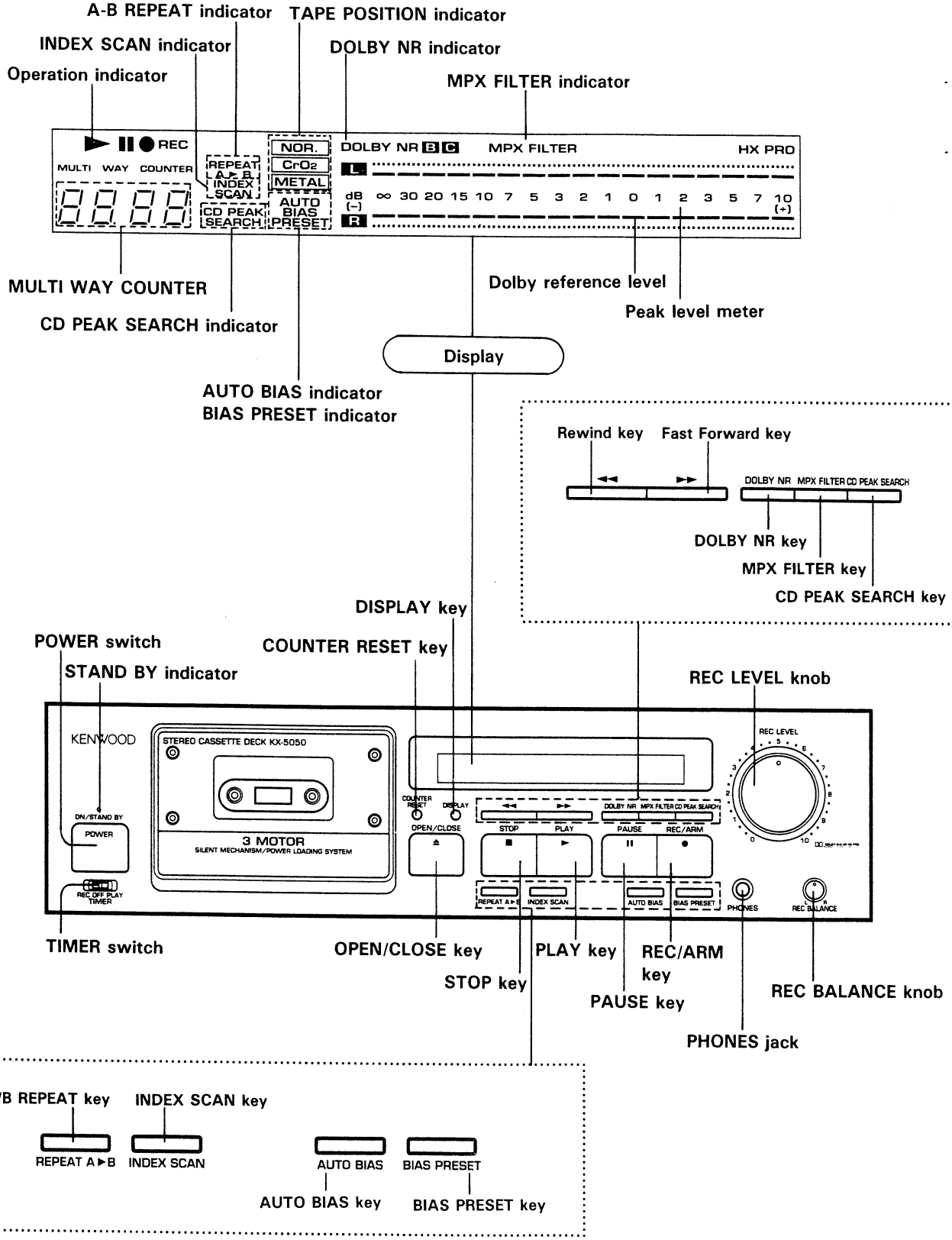
# CONTROLS & INDICATORS KX-3050




INSTRUCTION MANUAL

| | |
|---|---|
| B60-0876-00 English | |
| B60-0877-00 French | E,P |
| B60-0878-00 Spanish | M |
| B60-0879-00 GE,DU,It | E |

# CONTROLS & INDICATORS KX-5050




INSTRUCTION MANUAL

B60-0873-00 English

B60-0874-00 French E,P

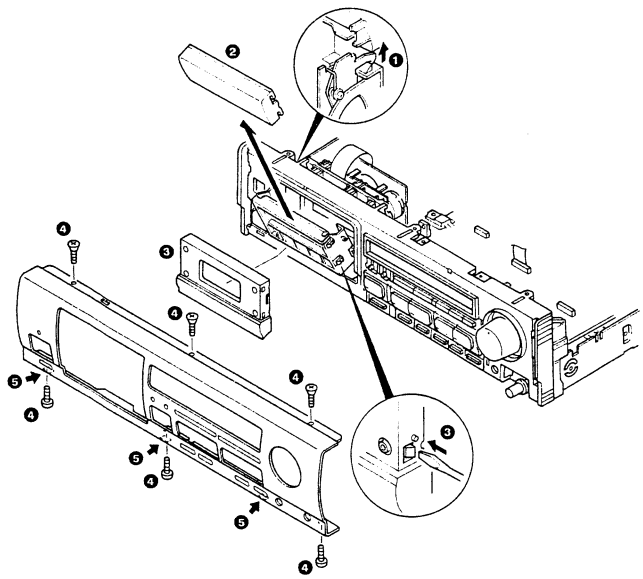
B60-0875-00 GE,DU,It E

B60-1001-00 Spanish M

# DISASSEMBLY FOR REPAIR

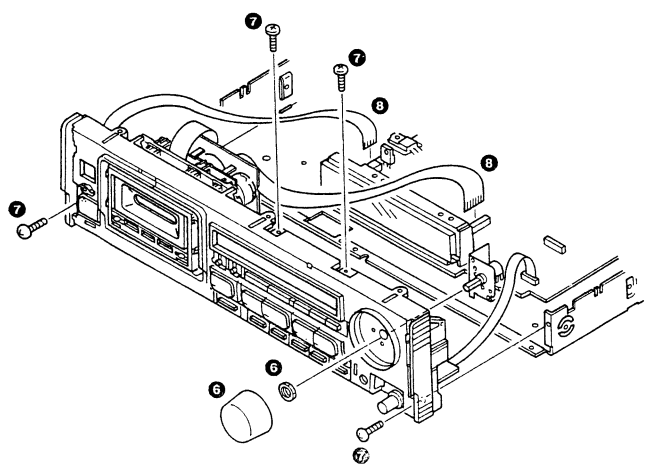
### Remove the front panel.

1. The Eject lever moves to the arrow direction ❶.
2. Remove the cassette lid ❷.
3. Remove the two claws ❸, then remove the cassette holder.
4. Remove the six screws ❹ and remove the three claws ❺, then remove the front panel.



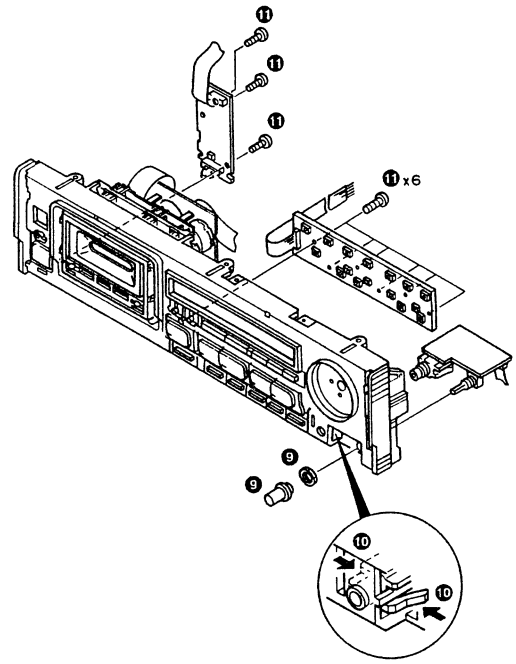
### Remove the sub panel.

5. Remove the REC volume knob, and nut ❻.
6. Remove the four screws ❼, then remove the sub panel assy.
7. Remove the two flat cable ❽.



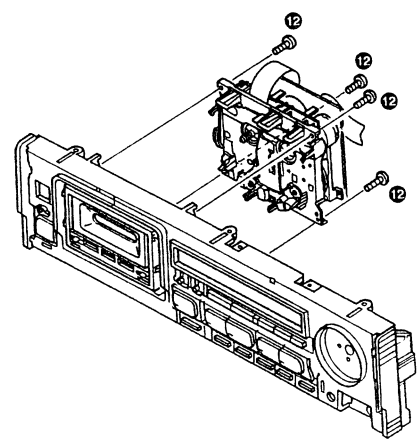
### Remove the PC boad.

8. Remove the REC balance knob and nut ❾.
9. Remove the phono jack to arrow direction ❿.
10. Remove the nine screws ⓫, then remove the PC board.

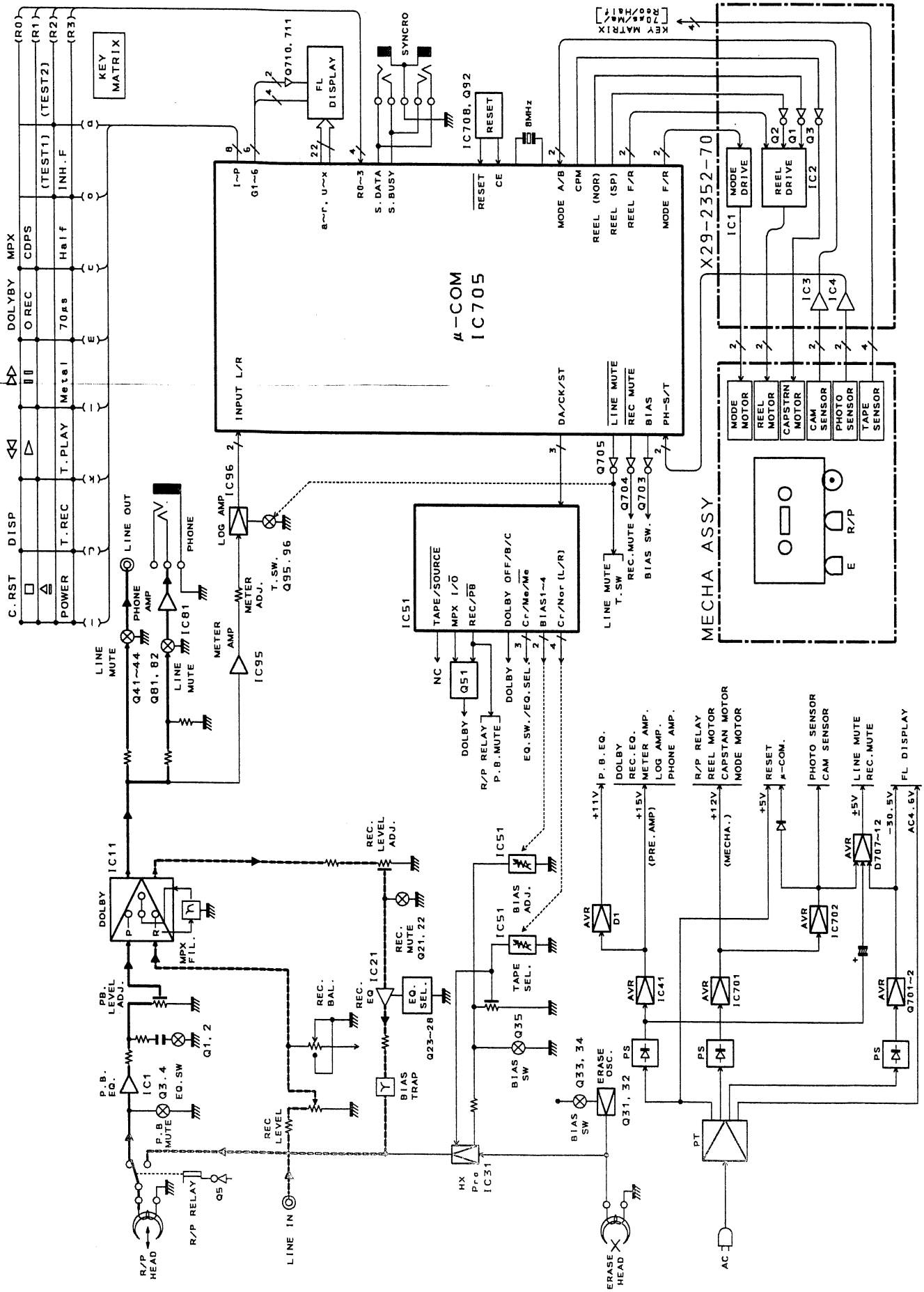



### Remove the mechanism

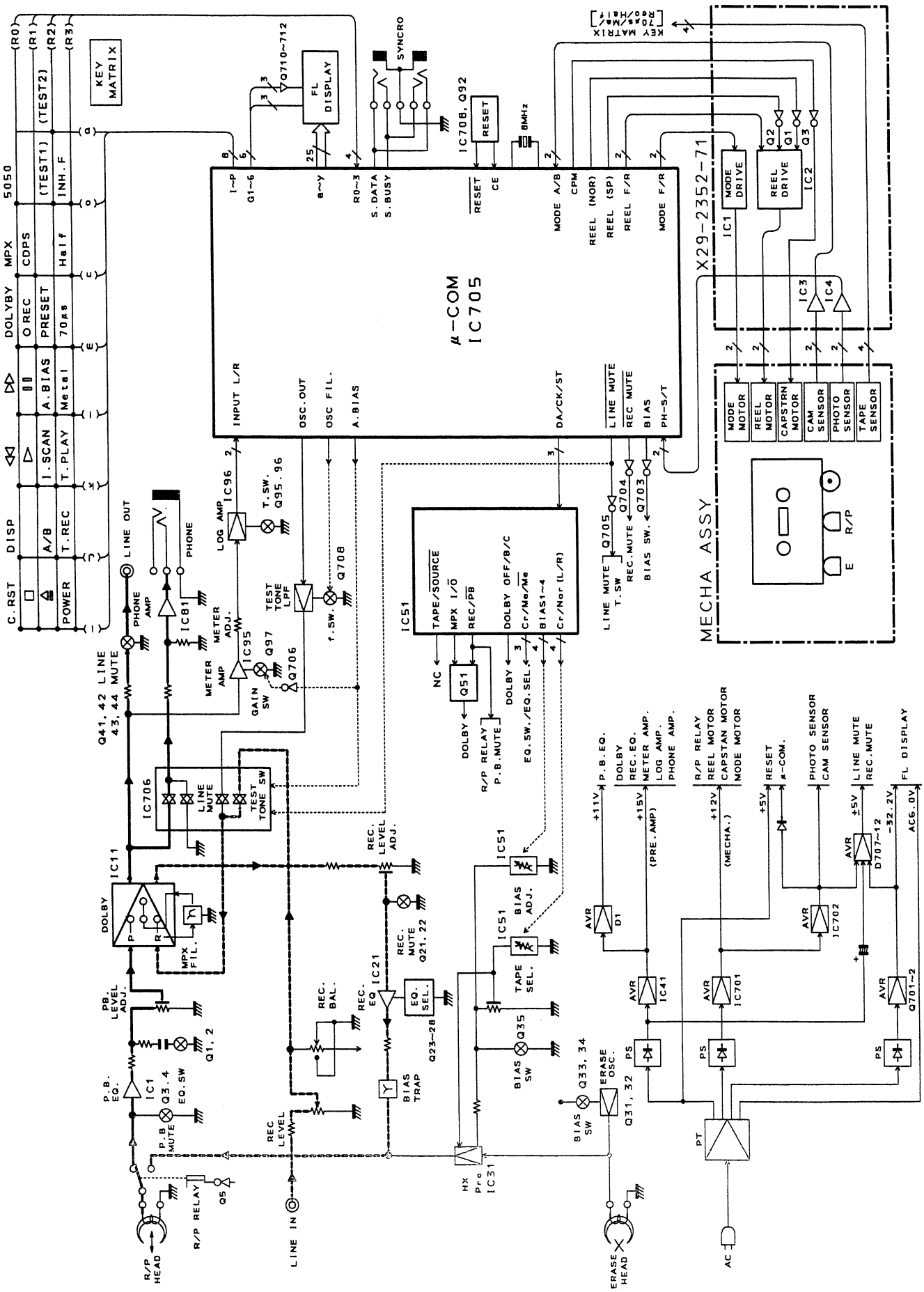
11. Remove the four screws ⓬, then remove the mechanism.



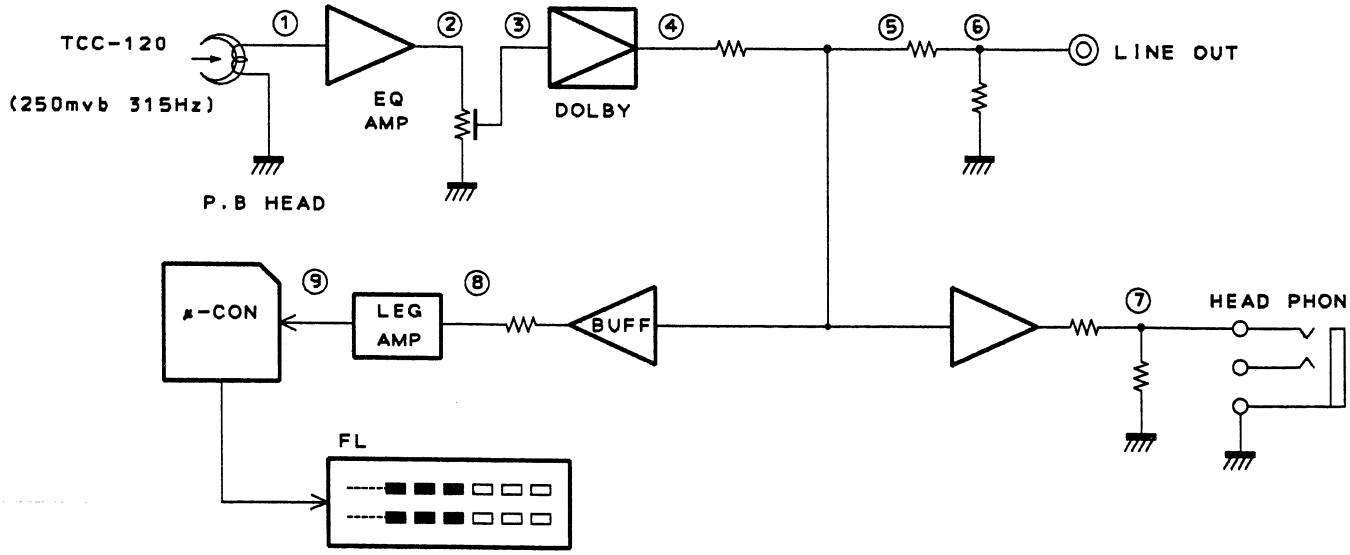
# BLOCK DIAGRAM KX-3050

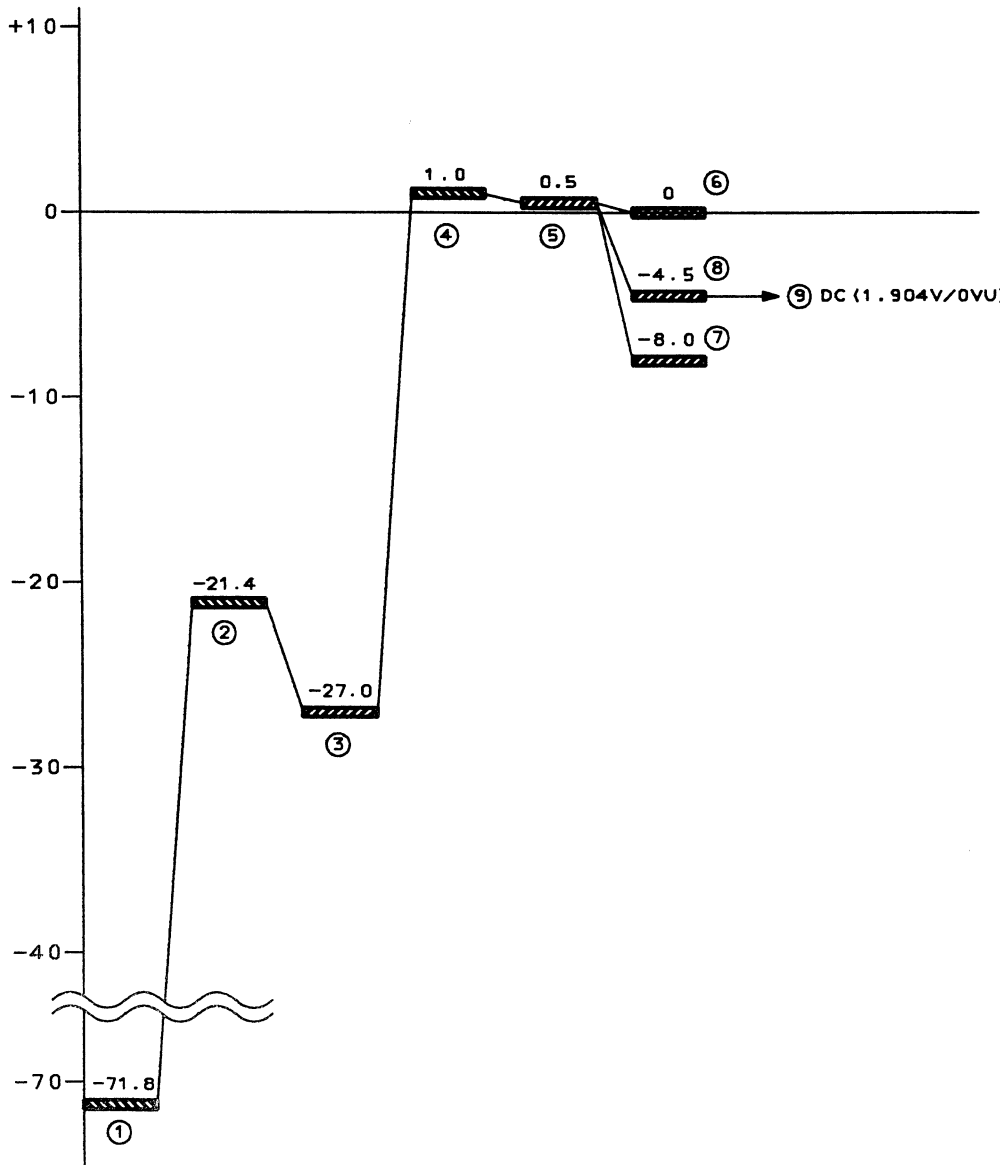


# BLOCK DIAGRAM KX-5050

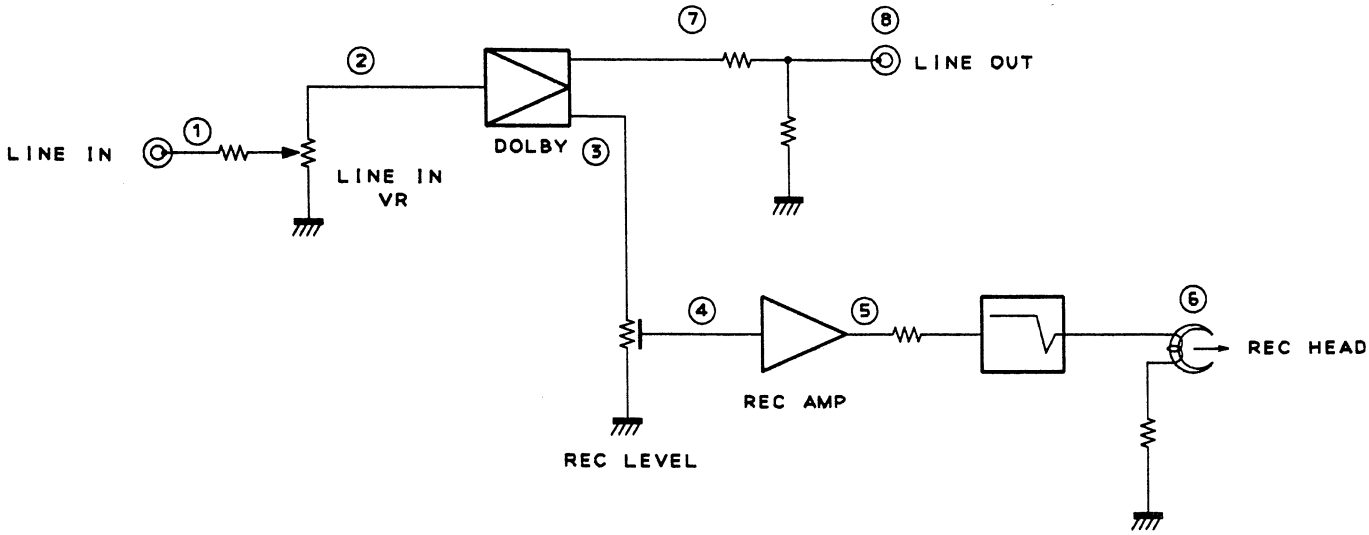


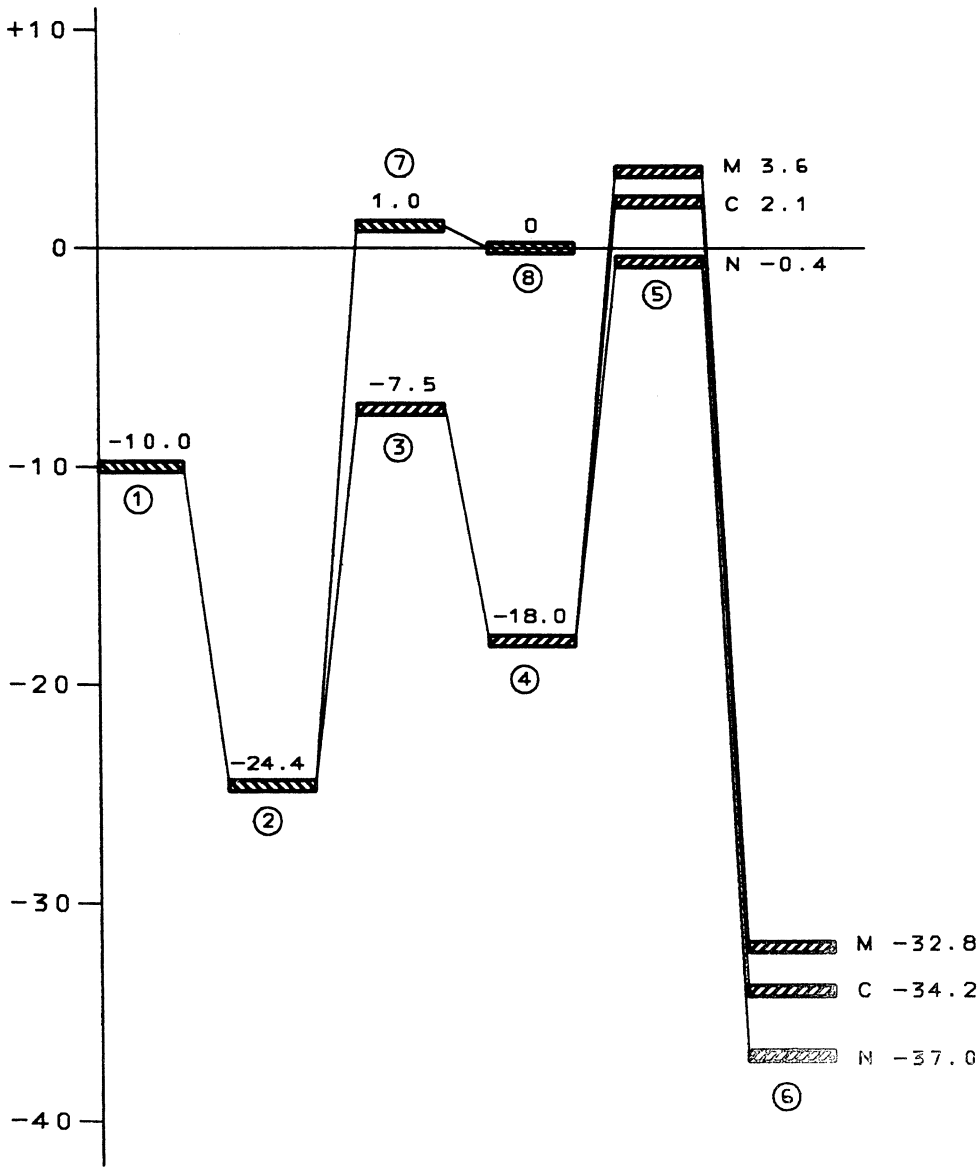
# LEVEL DIAGRAM



# LEVEL DIAGRAM



# CIRCUIT DESCRIPTION

**Cassette unit (X26-1312-70)**

| Ref. No. | Ref. Name | Use/Function | Operation/Condition |
|---|---|---|---|
| IC1 | TA8125S | Playback equalizer amplifier | |
| IC11 | HA1217NT | Dolby IC | |
| IC21 | RC4565D-D NJN4565D-D | Recording equalizer amplifier | |
| IC31 | UPC1297CA | HX-Pro. IC | |
| IC41 | BA17815T UPC7815AHF | Audio system +15 V power supply | |
| IC51 | NJU7313L TC9164N | Audio system control IC | |
| IC81 | RC4565L NJN4565L | Headphone amplifier | |
| IC95 | RC4565D-D NJN4565D-D | Meter amplifier | |
| IC96 | BA6138 | Meter IC | The attack time and the recovery time are determined by the CR constants of pins ③ and ⑦. |
| IC701 | BA17812T UPC7812AHF | Mechanism +12 V power supply | |
| IC702 | BA17805T UPC7805AHF | Microprocessor +5 V power supply | |
| IC705 | CXP82320-114Q | Microprocessor | |
| IC706 | XRU4053B, FC4053BP | Test tone switching/ Headphone mute | Controls pins ⑥, ⑨, ⑪ and ⑫, and changes headphone mute and test tone (only Rch) over. (KX-5050 only) |
| IC708 | PST529D M51951ASL | Reset IC | LOW RESET |
| Q1, 2 | 2SC3311A (Q, R) 2SC2458(Y, GR) | 70 μ/120 μ switching | ON: 70 μ OFF: 120μ |
| Q3, 4 | 2SC3311A (Q, R) 2SC2458 (Y, GR) | Playback mute | ON: REC, REC PAUSE |
| Q5 | 2SC3311A (Q, R) 2SC2458 (Y, GR) | Relay drive | ON: REC, REC PAUSE |
| Q6 | UN4116, DTA143TS | For prevention of relay misoperation | |
| Q21, 22 | 2SD1302 (S, T) 2SC2878 (B) | Recording mute | OFF: REC |
| Q23~28 | 2SC3311A (Q, R) 2SC2458 (Y, GR) | f-characteristic change for recording | ㉓ ㉔ ON: $Cro_2$ ㉕ ㉖ ON: MET ㉗ ㉘ OFF: MET |
| Q31, 32 | 2SC3311A (Q, R) 2SC2458 (Y, GR) | Erasing oscillation | |
| Q33 | 2SC3940A (R, S) | Erasing circuit, HX-Pro circuit power supply | |
| Q34, 35 | UN4219, DTC113ZS | Bias control | OFF: REC |
| Q41~44 | 2SC3311A (Q, R) 2SC2458 (Y, GR) | LINE MUTE | OFF: PLAY/REC/REC/PAUSE |
| Q51 | UN4212, DTC124ES | MPX change | ON: MPX ON |
| Q81,82 | 2SD1302 (S, T) 2SC2878 (B) | Headphone mute | (KX-3050 only) |
| Q92 | 2SC3311A (Q, R) 2SC2458 (Y, GR) | Reset | ON: AC plug-in |
| Q95, 96 | 2SC3311A (Q, R) 2SC2458 (Y, GR) | Meter IC time constant change | ON: PLAY/REC |
| Q97 | 2SC3311A (Q, R) 2SC2458 (Y, GR) | Meter amplifier gain change | ON: AUTO BIAS (KX-5050 only) |
| Q701 | 2SA1309A (Q, R) 2SA1048 (Y, GR) | FL-B power supply control | |
| Q702 | 2SB1375, 2SB1370 | FL-B power supply | |
| Q703 | 2SA1309A (Q, R) 2SA1048 (Y, GR) | Bias control | OFF: REC |
| Q704 | 2SA1309A (Q, R) 2SA1048 (Y, GR) | REC MUTE drive | OFF: REC |
| Q705 | 2SA1309A (Q, R) 2SA1048 (Y, GR) | LINE MUTE drive | OFF: PLAY, REC, REC PAUSE |
| Q706 | 2SA1309A (Q, R) 2SA1048 (Y, GR) | Meter amplifier gain change | ON: AUTO BIAS (KX-5050 only) |

# CIRCUIT DESCRIPTION

**Cassette unit (X26-1312-70)**

| Ref. No. | Ref. Name | Use/Function | Operation/Condition |
|---|---|---|---|
| Q707 | UN4216, DTC143TS | Test tone change | ON: 400 OFF: 10 kHz (KX-5050 only) |
| Q708 | UN4116, DTA143TS | Test tone change | ON: 10 k OFF: 400 (KX-5050 only) |
| Q710~712 | UN4219, DTC113ZS | FL drive | |
| Q713 | UN4212, DTC124ES | LED drive | ON: POWER ON OFF: STAND BY |
| D1 | ISS133, HSS104 | For relay | |
| D2 | RD11ES (B2), HZS11N (B2) | Playback equalizer amplifier power supply | |
| D3 | ISS133, HSS104 | Mute | |
| D15, 16 | ISS133, HSS104 | SYNCHRO | |
| D17, 18, 20, 21 | ISS133, HSS104 | SYNCHRO electrostatic charge countermeasure | |
| D31 | ISS133, HSS104 | Bias control | |
| D40 | RD7.5JS(B) HZS7.5S (B) | FL erasing voltage | |
| D51, 52 | ISS133, HSS104 | Electrostatic charge countermeasure | |
| D53, 54 | ISS133, HSS104 | 70 $\mu$/120 $\mu$ change | |
| D55~58 | ISS133, HSS104 | Electrostatic charge countermeasure | |
| D91 | ISS133, HSS104 | AC detection | |
| D92 | ISS133, HSS104 | Reset | |
| D93 | ISS133, HSS104 | Microprocessor power supply | |
| D701~704 | S5688B, 1SR139-100 | Rectifying (Audio system) | |
| D705 | KBP02ML-6127 | Rectifying (Mechanism, microprocessor system) | |
| D706 | S5688B, 1SR139-100 | Rectifying (FL system) | |
| D707 | RD5.1JS (B), HZS5.1S (B) | Power supply for mute/drive (For −) | |
| D708 | ISS133, HSS104 | Power supply for mute/drive (For +) | |
| D709 | RD3.9ES (B), HZ3.9N (B) | Power supply for mute/drive (For +) | |
| D710 | ISS133, HSS104 | Microprocessor power supply | |
| D711, 712 | ISS133, HSS104 | Mute drive power (+) | |
| D713 | S5688B, 1SR139-100 | Reset & microprocessor periphery power | |
| D714~717 | ISS131, HSS104A | Half detection | |
| D719, 720 | ISS131, HSS104A | TIMER SW detection | |
| D724~730, 732~735, 737~741 | ISS131, HSS104A | KEY matrix | |

# CIRCUIT DESCRIPTION

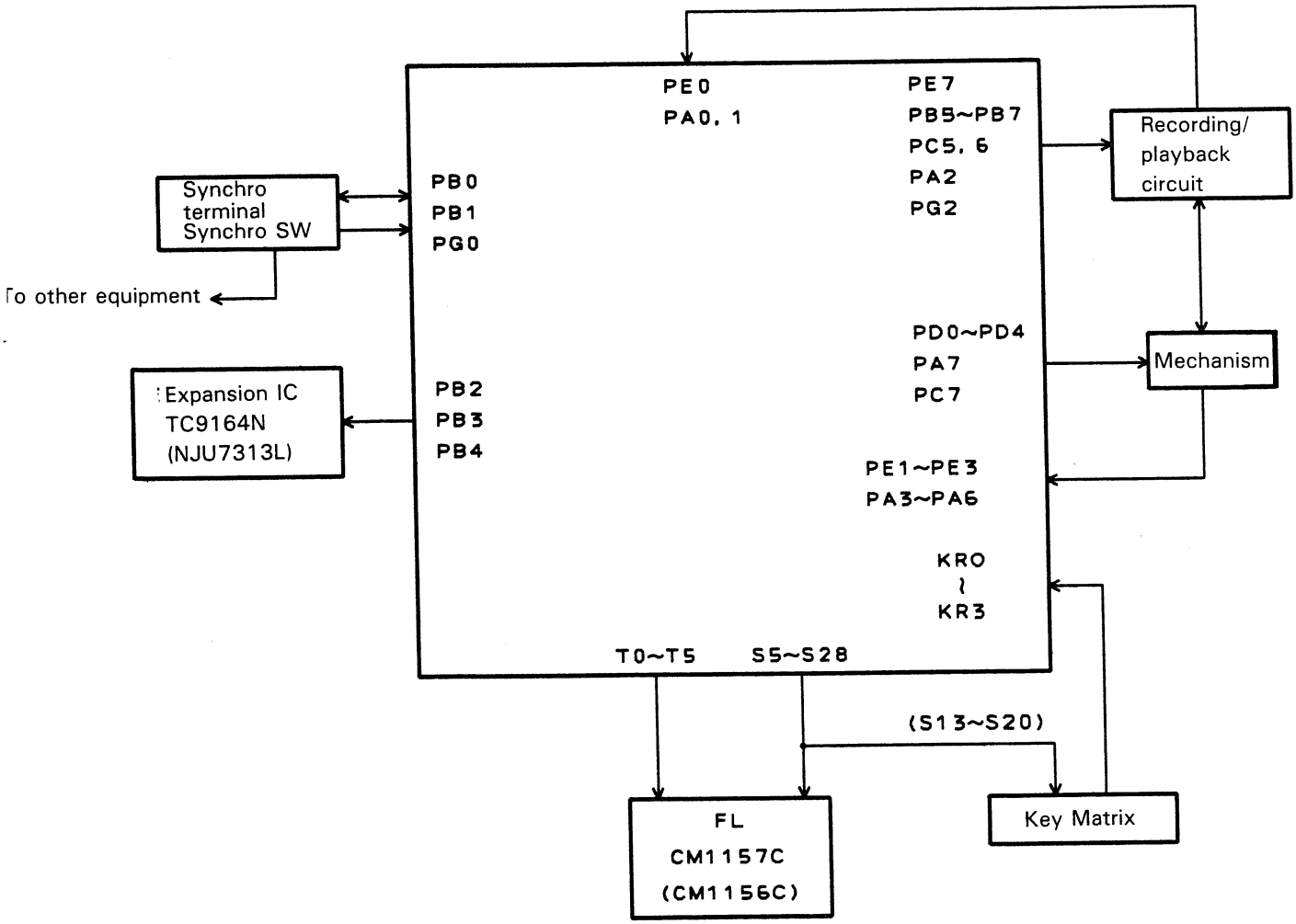
| Ref. No. | Ref. Name | Use/Function | Operation/Condition |
|---|---|---|---|
| D743, 744 | ISS131, HSS104A | AC detection | |
| D745 | ISS133, HSS104 | Voltage adjustment | (KX-5050 only) |
| D746, 747 | ISS133, HSS104 | Electrostatic charge countermeasure | |
| D748 | B30-1291-05 (LN21CPSLX) | STANDBY LED | |
| D749 | ISS131, HSS104A | POWER KEY | |
| D751 | ISS131, HSS104A | POWER KEY | |
| D752 | RD8.2JS (B2), HZS8.2S (B2) | +8.2 V power supply | (KX-5050 only) |
| D753 | ISS133, HSS104 | Voltage adjustment | (KX-5050 only) |
| D754 | ISS131, HSS104A | Microprocessor change | (KX-5050 only) |
| D755 | RD8.2JS (B2), HZS8.2S (B2) | −8.2 V power supply | (KX-5050 only) |
| D756~759 | ISS133, HSS104 | Electrostatic charge countermeasure | |

**Control unit (X29-2352-70)**

| Ref. No. | Ref. Name | Use/Function | Operation/Condition |
|---|---|---|---|
| IC1 | BA6209 | Mode motor drive | ⑤ H ⑥ L: NOR ⑤ L ⑥ H: RVS |
| IC2 | BA6229 | Reel motor drive | ⑤ L ⑥ H: FF/PLAY/REC ⑤ H ⑥ L: RVS |
| IC3 | BA10393N | Mode motor position detection | |
| IC4 | BA10393N | Reel pulse detection | |
| Q1, 2 | UN4219, DTC113ZS | Reel motor speed change | FF/RWD Q1: ONPLAY/REC Q2: ON |
| Q3 | 2SC3246 | Capstan motor drive | ON: CPM ON |

# CIRCUIT DESCRIPTION

**Microprocessor periphery block diagram**



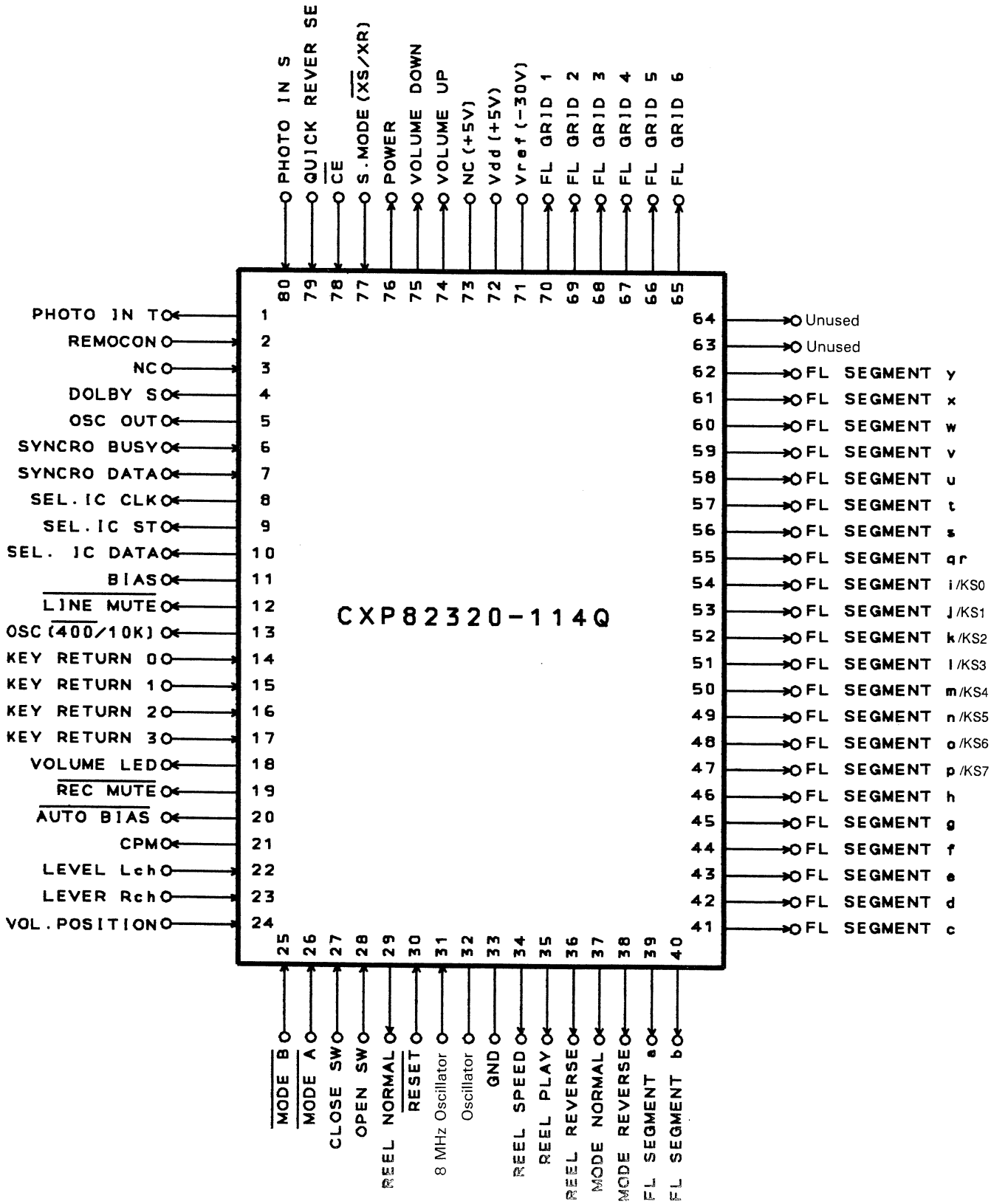

**Key Matrix**

| | KR0 | KR1 | KR2 | KR3 |
|---|---|---|---|---|
| KS0 | C. RESET | ■ | LOADING | POWER |
| KS1 | DISPLAY | (◄) | *(A ► B) | T. REC |
| KS2 | ◄◄ | ► | *(I. SCAN) | T. PLAY |
| KS3 | ►► | II | *(A. BIAS) | METAL |
| KS4 | MPX | ● | *(PRESET) | $CrO_2$ |
| KS5 | DOLBY | CDPS | (DIR) | HALF |
| KS6 | 3050/5050 | MONITOR | TEST 1 | INHF |
| KS7 | (RVS MODE) | ($\overline{2}$/3 HEAD) | TEST 2 | (INHR) |

* KX-5050 only

# CIRCUIT DESCRIPTION

Pin connection




*Ports 54 to 47 serve also as KEY SCAN 0 to 7.

# CIRCUIT DESCRIPTION

**Pin description**

(Pull up "H", Pull down "L")

| Pin No. | Pin Name | I/O | Name | Description |
|---|---|---|---|---|
| 1 | PE3/INT3 | I | PHOTO IN TO | Photosensor input (Take-up side) |
| 2 | PE4/REM | I | REMOCON | Remote control input "L" |
| 3 | PE5 | | | NC "H" |
| 4 | PE6 | O | DOLBY S | Dolby S change output "H" |
| 5 | PE7/TO | O | OSC OUT | Square wave output terminal ("H" KX-3050 only) |
| 6 | PB0/CINT | I/O | SBUSY | Serial 'BUSY' input/output |
| 7 | PB1/$\overline{COS}$ | I/O | SDATA | Serial 'DATA' input/output |
| 8 | PB2/$\overline{SCKO}$ | O | CLK | Selector IC 'CLOCK' output |
| 9 | PB3/SIO | O | ST | Selector IC 'STROBE' output |
| 10 | PB4/SOO | O | DATA | Selector IC 'DATA' output |
| 11 | PB5/$\overline{SCK1}$ | O | BIAS | Bias ON/OFF control H: ON |
| 12 | PB6/SI1 | O | $\overline{LINE\ MUTE}$ | Line mute control L: ON |
| 13 | PB7/SO1 | O | OSC FILTER | 400/$\overline{10K}$ filter change ("H" KX-3050 only) |
| 14~17 | KR0~3 | I | KR0~3 | Key return signal input |
| 18 | PC4/KR4 | O | VOL. LED | Volume LED drive port "L" |
| 19 | PC5/KR5 | O | $\overline{REC\ MUTE}$ | REC mute control L: ON |
| 20 | PC6/KR6 | O | A. BIAS | A. BIAS NORMAL/$\overline{OSC}$ change |
| 21 | PC7/KR7 | O | CPM | Capstan motor ON/OFF control |
| 22 | PA0/AN0 | I | LEVEL Lch | Lch level input |
| 23 | PA1/AN1 | I | LEVEL Rch | Rch level input |
| 24 | PA2/AN2 | I | V. POSITION | Motor volume position detection "L" |
| 25 | PA3/AN3 | I | $\overline{MODE\ B}$ | Mechanism position detection SW B |
| 26 | PA4/AN4 | I | $\overline{MODE\ A}$ | Mechanism position detection SW A |
| 27 | PA5/AN5 | I | CLOSE | Loading close detection switch input |
| 28 | PA6/AN6 | I | OPEN | Loading open detection switch input |
| 29 | PA7/AN7 | O | REEL NOR | Reel motor control (Normal) |
| 30 | RST | I | $\overline{RESET}$ | Reset signal input (LOW RESET) |
| 31 | EXTAL | I | | Clock oscillator connection terminal |
| 32 | XTAL | | | Clock oscillator connection terminal |
| 33 | Vss | | | GND terminal |
| 34 | PD0/S0 | O | REEL SP | Reel speed control H: High speed |
| 35 | PD1/S1 | O | REEL PLAY | Reel speed control H: Low speed |
| 36 | PD2/S2 | O | REEL REV | Reel motor control (Reverse) |
| 37 | PD3/S3 | O | MODE NOR | Mode motor control (Normal) |
| 38 | PD4/S4 | O | MODE REV | Mode motor control (Reverse) |
| 39 | PD5/S5 | O | a | FL segment |
| 40 | PD6/S6 | O | b | FL segment |
| 41 | PD7/S7 | O | c | FL segment |
| 42 | PF0/S8 | O | d | FL segment |
| 43 | PF1/S9 | O | e | FL segment |

# CIRCUIT DESCRIPTION

| Pin No. | Pin Name | I/O | Name | Description |
|---|---|---|---|---|
| 44 | PF2/S10 | O | f | FL segment |
| 45 | PF3/S11 | O | g | FL segment |
| 46 | PF4/S12 | O | h | FL segment |
| 47 | PF5/S13 | O | p | FL segment and key scan signal output 7 |
| 48 | PF6/S14 | O | o | FL segment and key scan signal output 6 |
| 49 | PF7/S15 | O | n | FL segment and key scan signal output 5 |
| 50 | S16 | O | m | FL segment and key scan signal output 4 |
| 51 | S17 | O | l | FL segment and key scan signal output 3 |
| 52 | S18 | O | k | FL segment and key scan signal output 2 |
| 53 | S19 | O | j | FL segment and key scan signal output 1 |
| 54 | S20 | O | i | FL segment and key scan signal output 0 |
| 55 | T15/S21 | O | q, r | FL segment |
| 56 | T14/S22 | O | s | FL segment |
| 57 | T13/S23 | O | t | FL segment |
| 58 | T12/S24 | O | u | FL segment |
| 59 | T11/S25 | O | v | FL segment |
| 60 | T10/S26 | O | w | FL segment |
| 61 | T9/S27 | O | x | FL segment |
| 62 | T8/S28 | O | y | FL segment |
| 63 | T7 | O | | Unused |
| 64 | T6 | O | | Unused |
| 65 | T5 | O | 6G | FL grid |
| 66 | T4 | O | 5G | FL grid |
| 67 | T3 | O | 4G | FL grid |
| 68 | T2 | O | 3G | FL grid |
| 69 | T1 | O | 2G | FL grid |
| 70 | T0 | O | 1G | FL grid |
| 71 | VFDP | | | FL voltage supply terminal |
| 72 | VDD | | | Positive voltage supply terminal |
| 73 | NC | | | (Connected with VDD) |
| 74 | PG0 | O | UP | Motor potentiometer UP control "L" |
| 75 | PG1 | O | DOWN | Motor potentiometer DOWN control "L" |
| 76 | PG2 | O | POWER | Power ON/OFF control |
| 77 | PG3 | I | S. MODE | Synchro mode ($\overline{XS}$/XR) identification "L" |
| 78 | PE0/INT0 | I | $\overline{CE}$ | Back-up detection terminal |
| 79 | PE1/INT1 | I | QUICK RVS | Quick reverse sensor input "H" |
| 80 | PE2/INT2 | I | PHOTO IN S | Photosensor input (supply side) |

* The reel voltage have the following values

| | REELPLY | REELSP | Voltage [V] |
|---|---|---|---|
| PLAY, REC | H | L | 2,5 |
| FF, RWD, CUE, REV | L | H | 4,1 |
| LOADING | L | L | 8,0 |

# CIRCUIT DESCRIPTION

## FUNCTION DESCRIPTION

Microprocessor for control of one-way single cassette deck KX-5050/3050.

**(1) FEATURES**

① One-way 3-motor, 2-head
② HX-PRO
③ Auto BIAS (KX-5050)
④ Power loading
⑤ D.P.S.S
⑥ CD peak search
⑦ Dolby B, C
⑧ XS

**(2) OBJECTS OF CONTROL**

① Cassette mechanism. D40-1223-05: (KX-5050)
D40-1233-05: (KX-3050)
② IC TC9164N (NJU7313L)
③ Display FL CM1165C (KX-3050)
CM1167C (KX-5050)
④ Recording & playback circuit unit.

(3) OPERATING SPECIFICATIONS

① AUTO BIAS

a: KEY ACCEPTANCE CONDITIONS
Tape ready for recording must be available in the unit at the STOP state.

b: OPERATION
The tape is forwarded during 10 seconds, by taking into consideration the leader tape. Signals of 400 Hz and 10 kHz are recorded alternately, by changing successively the bias value from the deeper bias side. After finishing the recording the tape is wound back to the starting position, and then it is played back. The bias value at which 400 Hz ≦ 10 kHz is regarded as the optimum bias value. If the optimum value does not fall within the 16-step variable range, the bias is set to the initial presetting value (center value), and the indication is lit up. The presetting time is approximately 45 seconds at most.

c: PRESET
The bias value preset in the AUTO BIAS operation can be stored in the memory. When the PRESET key is pressed after the AUTO BIAS presetting, the bias value is stored in the memory. There are 3 types of memory, normal, chrome and metal. The memory is recalled when the PRESET key is pressed while the AUTO BIAS lamp is not lit, and the function is cancelled when it is pressed again.
When the PRESET function is ON, the optimum bias value is always recalled from the preset area according to the type of the tape, and it is always possible to record with optimum bias value also when the tape is changed and during TIMER REC.

d: METHOD TO CANCEL THE PRESETTING
If the AUTO BIAS key is pressed while the AUTO BIAS mode is preset, the bias value becomes invalid, and the initial presetting value (center value) is recalled.
If the BIAS PRESET key is pressed while BIAS PRESET is ON, the initial presetting value is recalled.

② XS

Two-way easy operation becomes available through the combination of amplifiers, receivers, etc., bearing the XS mark. Moreover, CD peak search becomes available through the combination with CD bearing the XS mark.

**(3) Power loading (OPEN/CLOSE)**

In the basic operation mode the reel motor is rotated during a given time (forward rotation) and the door is opened when the OPEN/CLOSE key is pressed. When it is pressed again, the motor is rotated during a given time (backward rotation) and the door is closed. When the door gets fully closed, the switch recognizing the closure (CLOSE SW) is turned ON. There are also the following kinds of special operation modes.

a. If a basic operation key (PLAY, FF, REW, REC, PAUSE, STOP) is pushed when the door is opening, the door is closed, and the operation corresponding to the key is started. (The door is merely closed when there is no cassette in the drive. The door opens again, however, when the REC or REC PAUSE key is pressed). No operation is carried out when multiple keys are pressed at the same time (DPSS).
b. OPEN/CLOSE operation is possible also when the POWER is OFF. (When AC is ON). When POWER is tuned ON or OFF while the door is open, the door is closed.
c. If the OPEN/CLOSE key is pressed with the mechanism in operation, the operation of the mechanism is stopped, and then the door is opened. This operation is invalid, however, during REC.
d. If the door is touched gently with the hand while it is opening, the motor is rotated for a given time when the OPEN recognition switch is turned OFF, and the door is closed. The same operation is carried out also when the door is pushed forth.
e. If the door is held in place with the hand when it is about to be opened, the motor is rotated for a given time, and after that the motor is stopped. The door is opened by inertia when the hand is released.
f. The same operation as e. is carried out when the door is caught by something or stopped by hand while it is

# CIRCUIT DESCRIPTION

opening (when both recognition switches are OFF).
The door opens when it is caught by something or held by hand while it is closing (when both recognition switches are OFF).

g. When the tape is loaded, it is rewound (about 24ms) to prevent slackness (when starting REC, it is rewound to prevent any unerased part).

**(4) Counter**

KX-5050 has a linear counter, and KX-3050 has a digital counter. The count is backed up during standby and when AC power is OFF.

**KEY DESCRIPTION**

| Name | Description | Display |
|---|---|---|
| FWD PLAY<br>► | If there is a cassette in the drive, it is played back in the forward direction. One track is repeated when this key is pressed during FWD playback. | FL |
| FF<br>►► | Tape is wound at high speed onto right-hand reel.<br>Skipped track selection when pushed during playback. | Linear counter (5050)<br>Digital counter |
| RWD<br>◄◄ | Tape is wound at high speed on the left-hand reel.<br>Skipped track selection when this pushed during playback.<br>REREC STANDBY when pushed during FWD REC. | Linear counter (5050)<br>Digital counter |
| STOP<br>■ | All operations are stopped. | |
| REC/ARM<br>● | Recording starts when pushed during STOP, REC-PAUSE, ARM.<br>If recording is in progress, ARM starts. | FL |
| PAUSE<br>II | REC PAUSE when pushed during recording. PLAY PAUSE when pushed during playback. | FL |
| COUNTER RESET | Resets linear counter to 0.00 (Digital count is reset to 0000).<br>Maintains 0.00 count when key is held down.<br>Stops when key is pressed during zero stop.<br>Invalid during DPSS track selection. | FL |
| DOLBY NR | Switches the Dolby noise reduction.<br>OFF→B→C (Cyclic) | |
| CDPS | Changes over to REC PAUSE when CD peak search key is pressed. | FL<br>CD PEAK SEARCH |
| DISPLAY | Switches the display indications.<br>All display→Counter only→All OFF (Cyclic)<br>Returns to ALL DISPLAY when POWER is turned ON.<br>ALL DISPLAY turns ON for 3 sec., and then turns OFF when this key is pushed when DISPLAY is OFF. | FL |
| A/B REPEAT<br>(only 5050) | Plays the section A-B of the tape back. (Only during playback).<br>When the key is first pressed, the point A is memorized, and when the key is pressed again, point B is memorized. When REWIND is pressed, playback starts from A, and is repeated 16 times.<br>If any other key is pressed, the A-B repeat function is cancelled.<br>Returns to normal operation after 16 times.<br>At least 10-second spacing required between points A and B. | FL<br>REPEAT A►B<br>8, 9) |
| AUTO BIAS<br>(only 5050) | Automatic adjustment of BIAS.<br>Cancell when pressed after presetting. | FL<br>AUTO BIAS |
| PRESET<br>(only 5050) | AUTO BIAS preset: The current optimum bias value is stored in the memory.<br>AUTO BIAS indication OFF: The memory is recalled. (The standard value 7 is recalled when there is nothing stored in the memory). | FL<br>PRESET |
| MPX FILTER | Turns the MPX filter ON/OFF. | FL |
| POWER | Turns the POWER ON when first pressed, and turns it OFF when pressed again. Can not be pressed repeatedly within 1 second. | |
| OPEN/CLOSE | Opens/closes the door.<br>If pressed when the mechanism is operating, it stops the mechanism, and then opens the door. (Invalid during REC)<br>Opens/closes the door also while stand by. | |

# CIRCUIT DESCRIPTION

## MECHANISM SW

| Name | Description | Display |
|---|---|---|
| Cassette detection SW | Turns ON when there is a cassette loaded in the deck. | |
| Recording permission SW | Turns ON when the recording permission tab of the cassette is intact. Recording is forbidden when this SW is OFF. | |
| $CrO_2$ SW | 70 $\mu$s detection SW (Metal, chrome: OFF, Normal: ON) | $CrO_2$ |
| METAL SW | Metal detection SW (Metal: OFF; Chrome, Normal: ON) | METAL |
| TIMER SW | Presets operating mode when POWER is turned ON.<br>PLAY Plays when there is cassette in the deck.<br>OFF Operation does not start.<br>REC Record when there is cassette in the deck. | |

## OPERATION DESCRIPTION (DPSS)

| Name | Description | Display |
|---|---|---|
| INDEX SCAN (5050 only) | Beginning of each track is played back successively for approximately 10 seconds. | INDEX SCAN . 12<br>Flickering Times played back |
| Zero stop | Stops the counter at 0.00 (0000) | |
| FF search | When the FF key pushed during PLAYBACK, skips forth (relative to the playback direction) as many tracks (up to 16) as the number of times the FF key is pressed.<br>If FF is pressed again during FF search, the number of times the key is pressed is added to the number of tracks to be skipped. | 6. 3<br>Number of key entries Number between tracks<br>(3050) 03<br>Number between tracks |
| RWD search | When the RWD key is pressed during PLAYBACK, Skips back (relative to the playback direction), the number of tracks (up to 16, including the current track) equivalent to the number of times the REW key is pressed.<br>If the RWD key is pressed during RWD search, the number of times the key is pressed is added to the number of tracks to be skipped. | 16 10<br>Number of key entries Number between tracks<br>(3050)<br>- 10<br>Number between tracks |
| One-track repeat | The current track is played back 16 times repeatedly, and then the normal playback is resumed, when the PLAY key is pressed once during playback or twice during any other operation. When the PLAY key is pressed again while a track is being repeated, the track is repeated 16 times from that instant. | . 7<br>(3050) Times played back<br>07<br>Times played back |
| Rewind play ◄◄ & ► | When the RWD and PLAY keys are pressed together, the tape is rewound to its end (RWD), and then a FF search is done on the forward side. When the first track is detected, playback starts. | |
| Dash & Play ◄◄ & ►► | Playback is performed when FF and RWD keys are pressed together. Cues and searches for the next track If a blank section continues for 10 seconds during playback. Playback is resumed when a track is found. This is repeated 16 times (16 side). | . 14<br>(3050) Times played back<br>14<br>Times played back |
| Rerec standby | If RWD key is pressed during REC, tape is reviewed (RVW) and played back when end of previous track is found. Playback lasts 2 seconds and then switches to REC PAUSE. | |
| Auto rec mute | If REC key is pressed again during recording, or REC key is pressed twice during STOP or REC PAUSE, REC MUTE turns ON for 4 seconds, recording is performed, and then REC PAUSE is resumed. | |

# CIRCUIT DESCRIPTION

**Initial state**

| Item | State |
|---|---|
| POWER | OFF |
| DOLBY | OFF |
| MPX FILTER | OFF |

**Selector IC data**

| TC9164N | | | |
|---|---|---|---|
| Item | State | Item | State |
| $CrO_2$ Lch | OFF | BIAS 1 | ON |
| NORMAL Lch | OFF | BIAS 2 | ON |
| $CrO_2$ Rch | OFF | BIAS 3 | ON |
| NORMAL Rch | OFF | BIAS 4 | OFF |
| TAPE/$\overline{\text{SOURCE}}$ | ON | MPX | OFF |
| CROM | OFF | REC/$\overline{\text{PLAY}}$ | PLAY |
| METAL | ON | ON/$\overline{\text{OFF}}$ | OFF |
| $\overline{\text{METAL}}$ | OFF | B/$\overline{\text{C}}$ | B |

**Backup data (When AC OFF)**

① POWER
② DOLBY
③ MPX FILTER
④ PRESET
⑤ BIAS data (NORMAL $CrO_2$, METAL)
⑥ Linear (digital) counter
*② to ⑥ during standby.

### Test mode

- Presetting method: TEST1 KS6 (0) → KR2

The operation mode is switched to the test mode by short-circuiting the 2 terminals mentioned above with a diode, and by the power ON.

- Release method: The test mode is cancelled by pressing the PAUSE key. The contents of the test mode are not backed up.

① All display ON
The display turns ON approximately 500 ms after turning the power ON, and remains ON for approximately 1.5 second.
The keys are enabled by releasing the ALL DISPLAY ON state. (TEST 2 is carried out with ALL DISPLAY ON).

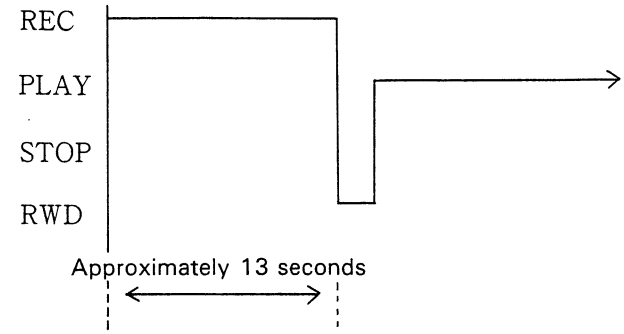
② Mechanism SW display
The states of the various mechanism SW are displayed on the level meter section when LINE MUTE is ON.

| $CrO_2$, | METAL, | F.REC INH |
|---|---|---|
| +1dB | +3dB | +7dB |

③ Direct change
The operation mode goes to the direct REC state also from the PLAY state.

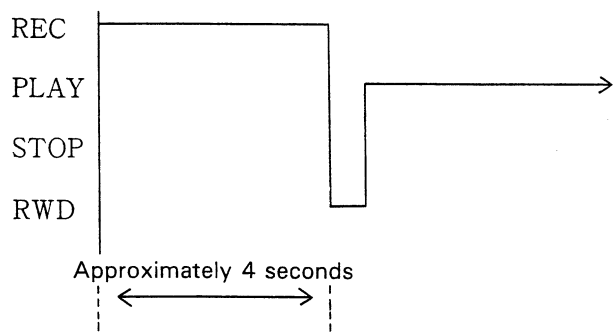
④ Timer PLAY
When the timer SW is set to PLAY, playback can be carried out after 2 seconds (minimum time).

⑤ Timer REC
When the timer SW is set to REC, automatic recording and playback can be carried out in conformity with the time chart shown below.




⑥ CDPS
When the CDPS key is entered, the "CDPS start" serial code is emitted, and after that the operation mode is switched to REC PAUSE.

⑦ 4-second REC
When the REC key is pressed with normal tape, recording is carried out for 4 seconds, the tape is rewound down to its beginning, and then it is played back. When the REC key is pressed again during rec, the additional recording of 4 seconds is carried out.




⑧ AUTO BIAS
The presetting time is shortened (Approximately 45 seconds → Approximately 37 seconds).

⑨ PRESET
Storage of the bias and level values, and shortening of the recalling time.

⑩ 6-second REC
When the REC key is pressed with a chrome or metal tape, recording is carried out during 3 seconds with DOLBY OFF and during 3 seconds with DOLBY B, the tape is rewound down to its beginning, and then it is played back during 3 seconds with DOLBY OFF and during 3 seconds with DOLBY B, DOLBY is OFF after that in the case of chrome tape. DOLBY is set to C with metal tape.

# CIRCUIT DESCRIPTION

## Timing chart

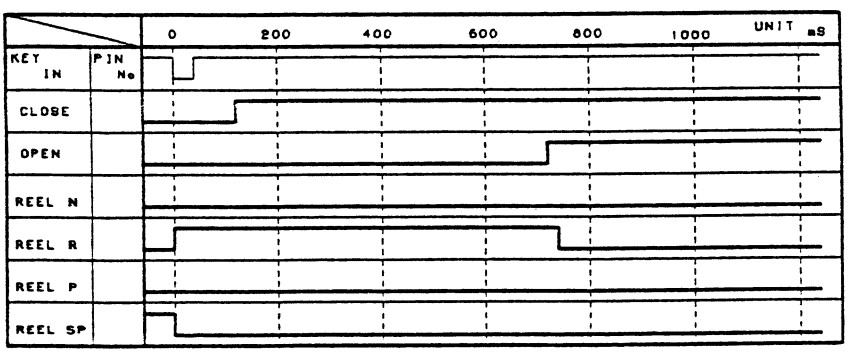
Mechanism (GK-7000 Giken Engineering) timing chart
The control method consists of rotating the cam gear of the center of the mechanism by means of the mode motor, and of detecting the desired position of the reflector plate mounted on the cam gear by means of two photosensors (MODE A, B). The timing is shown below.

| | | |
|---|---|---|
| MODE A: | Mode SW input A | L: ON |
| MODE B: | Mode SW input B | L: ON |
| MODE N: | Assist motor control (Normal rotation) | |
| MODE R: | Assist motor control (Reverse rotation) | |
| REEL N: | Reel motor control (Normal rotation) | |
| REEL R: | Reel motor control (Reverse rotation) | |
| REELPLY: | Reel motor speed control | PLAY voltage |
| REELSP: | Reel motor speed control | FF/RWD voltage |
| CMP: | Capstan motor control | H: ON L: OFF |
| L. MUTE: | Line mute control | H: OFF L: ON |
| R. MUTE: | Rec mute control | H: OFF L: ON |
| BIAS: | Bias oscillation | H: ON L: OFF |
| CLOSE: | Cassette holder position detection SW | H: OPEN L: CLOSE |
| OPEN: | Cassette holder position detection SW | H: OPEN L: CLOSE |

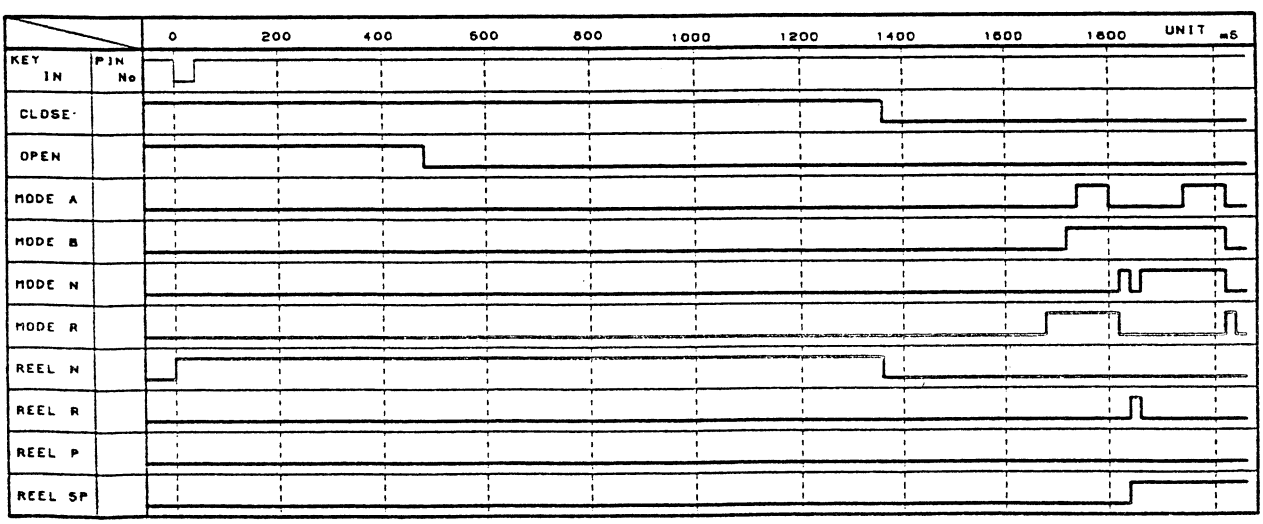
* The reel voltage is shown below.

| | REELPLY | REELSP | Voltage [V] |
|---|---|---|---|
| PLAY, REC | H | L | 2,5 |
| FF, RWD, CUE, REV | L | H | 4,1 |
| LOADING | L | L | 8,0 |

CLOSE to OPEN

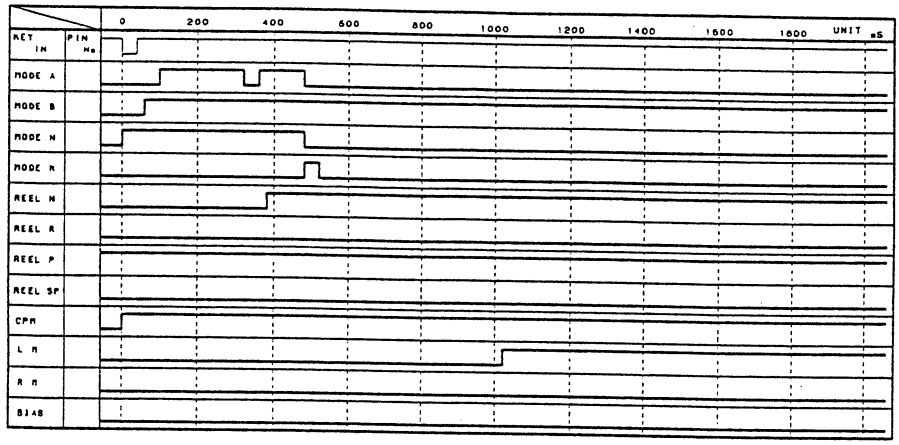



OPEN to CLOSE (with HALF)

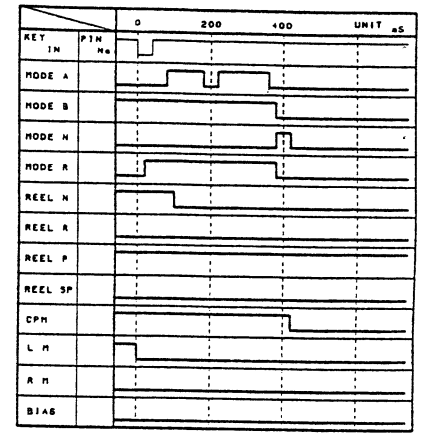


# CIRCUIT DESCRIPTION

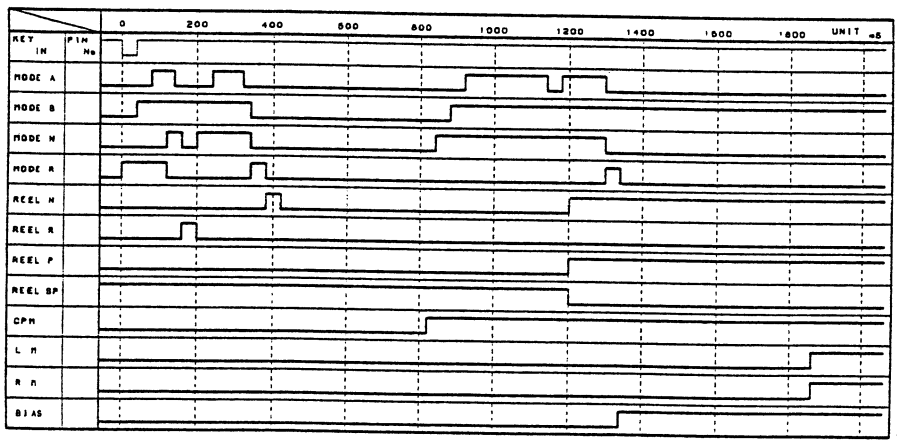
STOP to PLAY



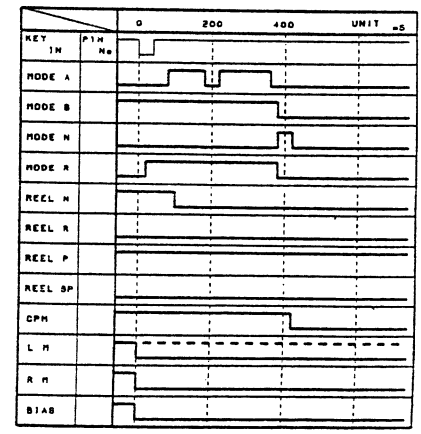

PLAY tp STOP



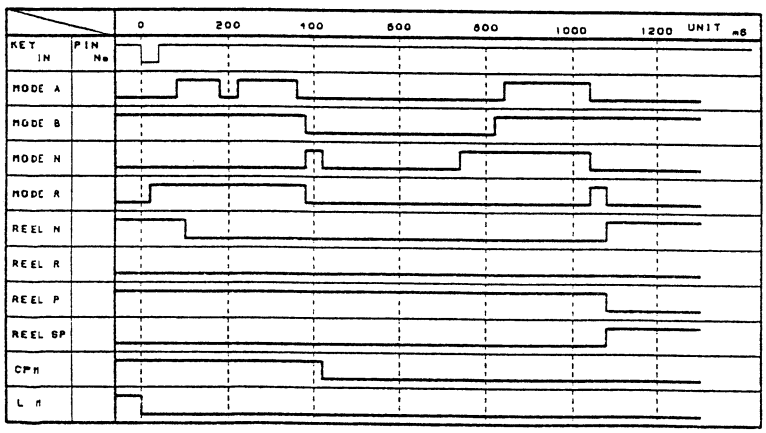

STOP to REC



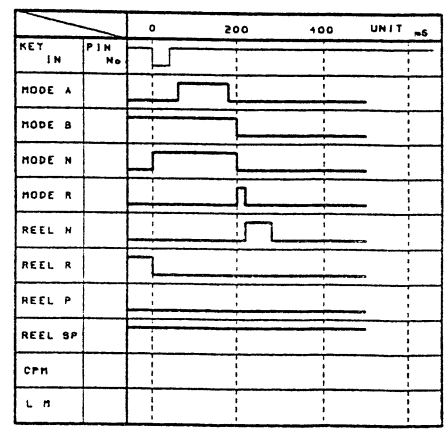

REC to STOP (PAUSE )




PLAY to CUE

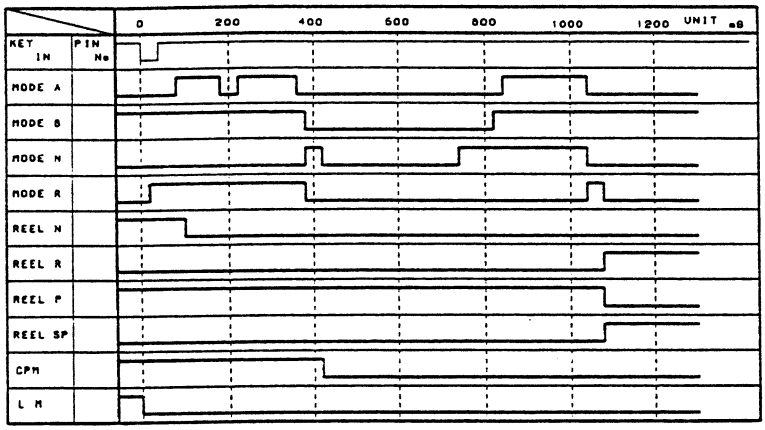



CUE to STOP

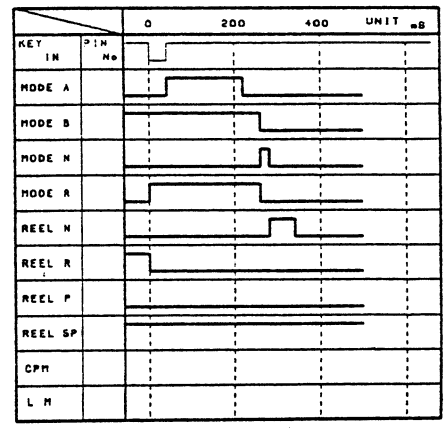


# CIRCUIT DESCRIPTION

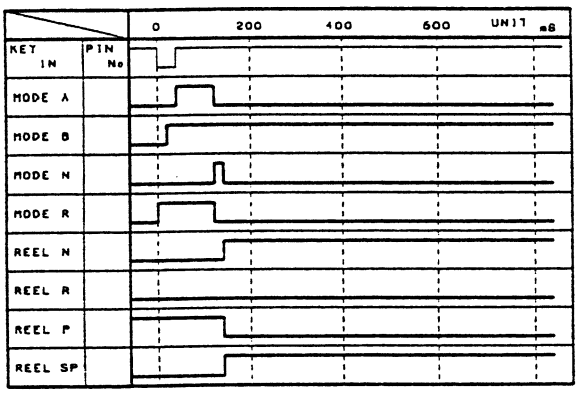
PLAY to RVW



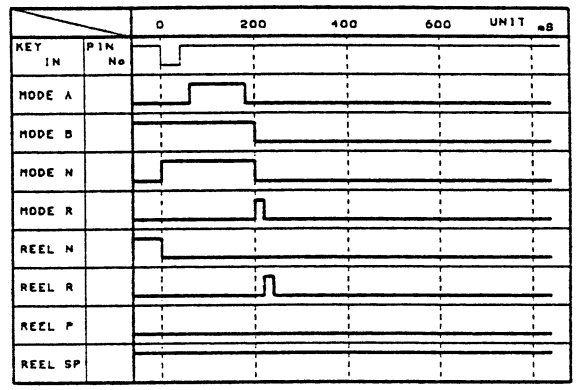

RVW to STOP



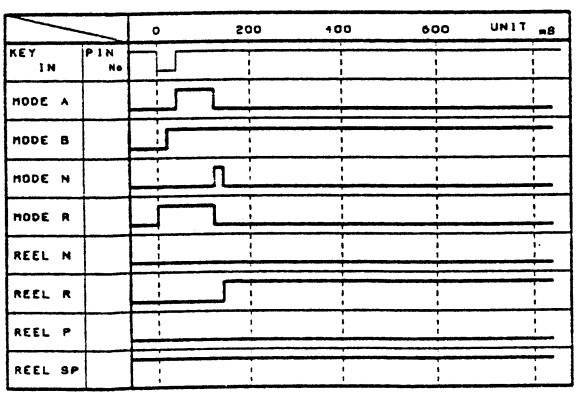

STOP to FF



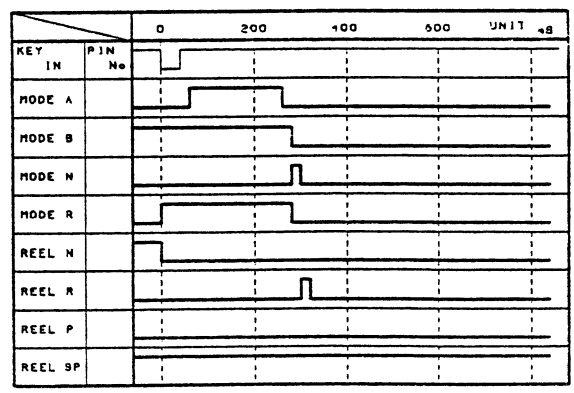

FF to STOP



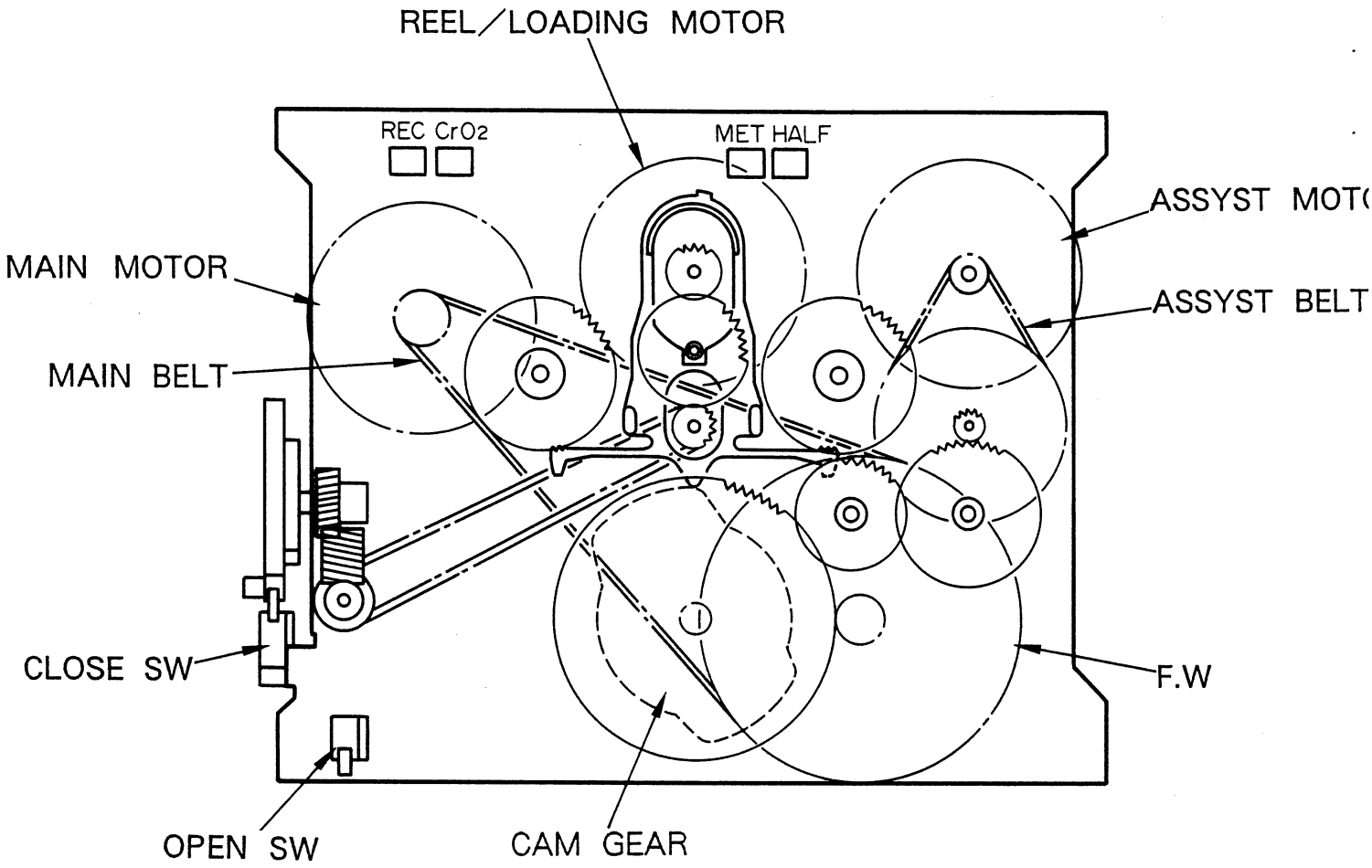

STOP to RWD

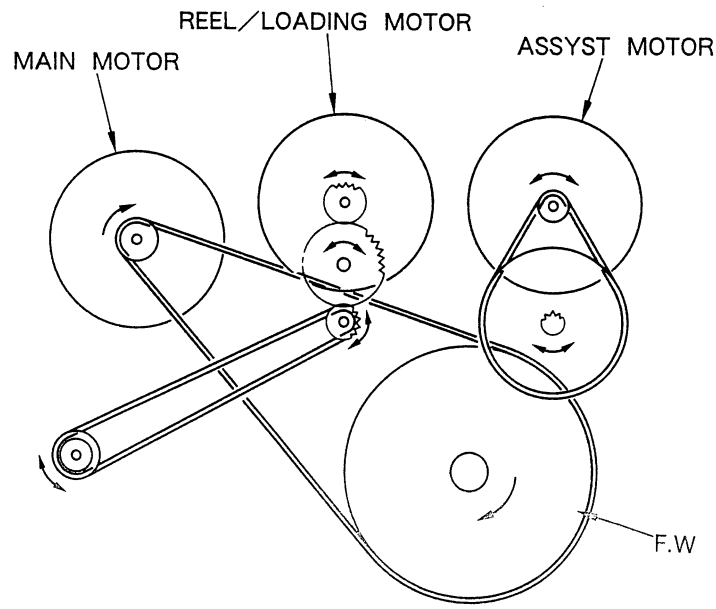



RWD to STOP



# MECHANISM DESCRIPTION




**Mechanism specification**

Use of parts

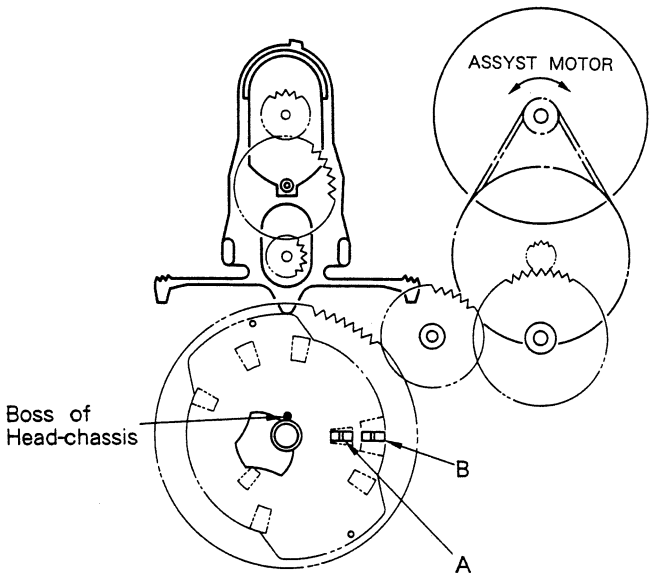
| | | |
|---|---|---|
| MM | T42-0560-08 | DC MOTOR ASSY (CAPSTAN) |
| RM | T42-0592-08 | DC MOTOR ASSY |
| AM | T42-0593-08 | DC MOTOR ASSY |
| BM | D16-0299-08 | MAIN BELT |
| BR | D16-0325-08 | BELT |

PLAY Torque: 35~55 g·cm
FF/RWD Torque: 70~160 g·cm
Back Tension Torque: 2~5 g·cm

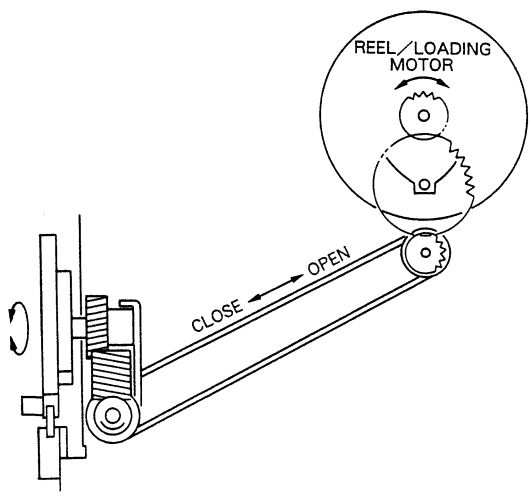
# MECHANISM DESCRIPTION

**STOP/OPEN/CLS**

① The assist motor rotates, and sets the mechanism to the STOP position by watching the state of the mechanism position detection SW.
Both mechanism position detection SW A and B stop at the ON position.
The brake ASSY is pushed up, and the reel idler is fixed.
The head is pushed down, because the cam of the cam gear is at the position shown in the figure.

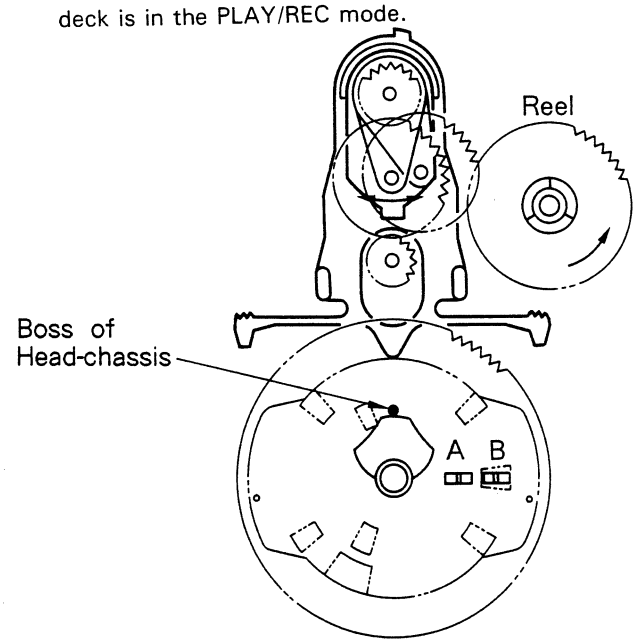



② The rotation of the reel motor rotates the OPEN/CLOSE pulley via reel idler.



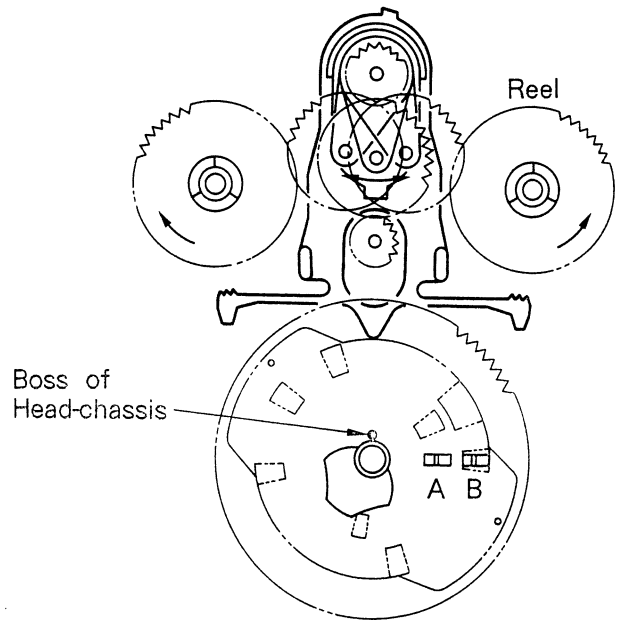

**PLAY/REC**

③ Rotate the assist motor, and adjust the cam gear by watching the state of the mechanism position detection SW.
A OFF H B ON L corresponds to the PLAY/REC position.
At this position the pulley is engaged with the reel, and the tape is wound by the rotation of the reel motor.
The head is raised by the cam of the cam gear, and the deck is in the PLAY/REC mode.

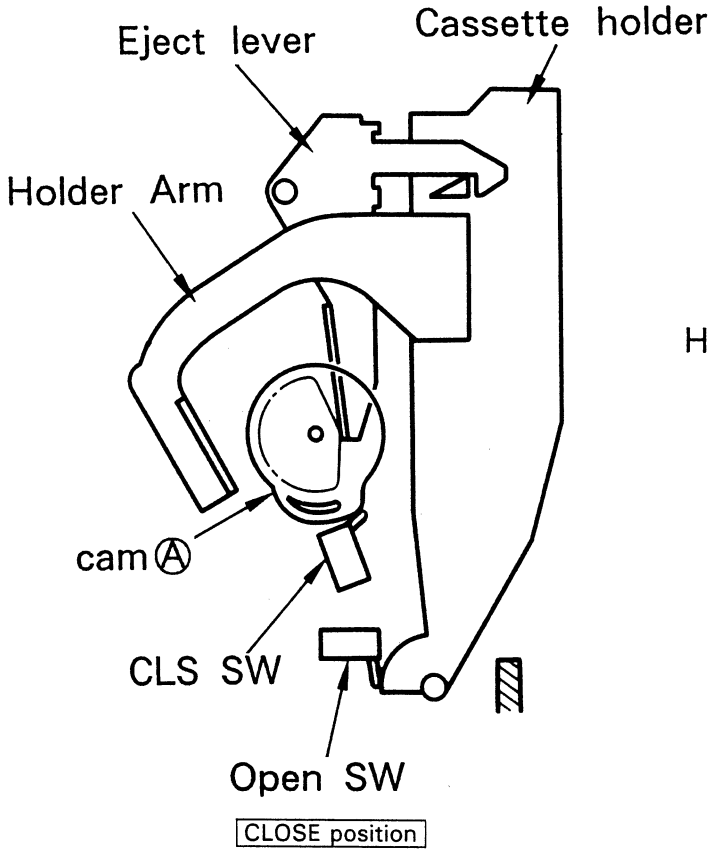



**FF/RWD**

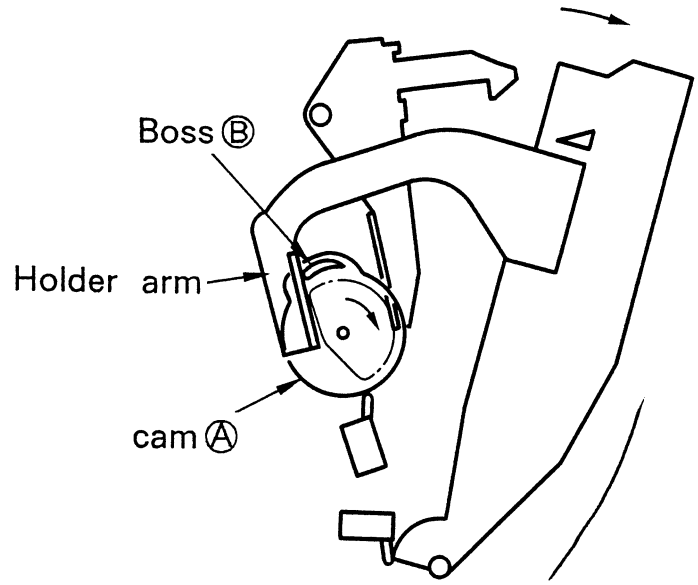
④ The cam gear is adjusted by the rotation of the assist motor.
A OFF B ON
The cam bear is at the position shown in the figure, and the head is lowered.
Moreover, the brake is also lowered.
FF/RWD is controlled by the rotation of the reel motor.



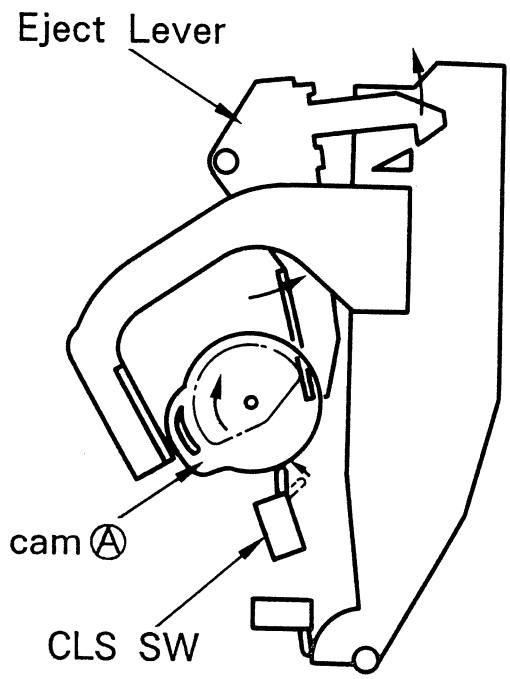
# MECHANISM DESCRIPTION

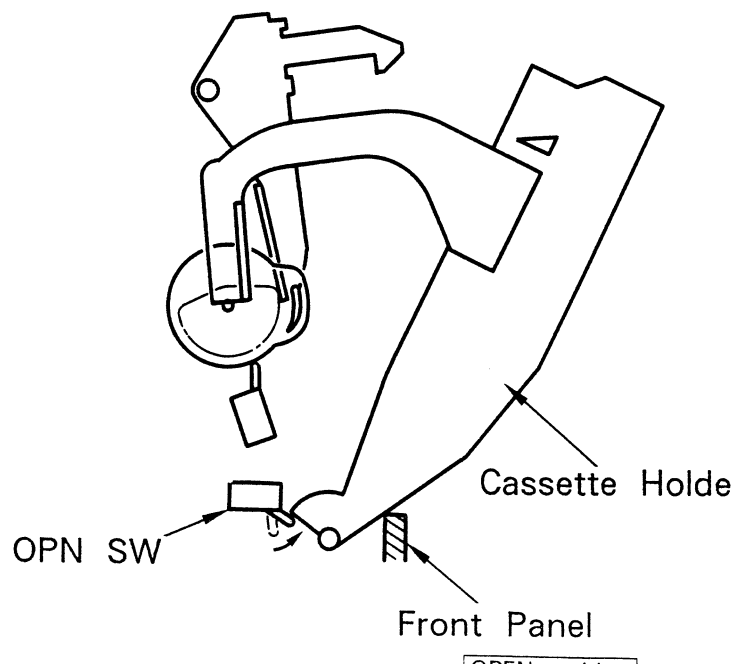



CLOSE position




4) When the cam A further rotates, the boss B begins to open while holding the tongue of the holder arm.




OPEN position

1) The cam A starts rotating
2) CLS SW turns OFF
3) The eject lever moves to the arrow direction, and the holder come off the stopper.
5) The cam stops rotating when the cassette holder comes off the OPN SW.
6) The cassette holder touches the front panel, and the holder gets at the open position.

# ADJUSTMENT

| No. | ITEM | INPUT SETTINGS | OUTPUT SETTINGS | CASSETTE TAPE DECK SETTINGS | ALIGNMENT POINTS | ALIGN FOR | FIG. |
|---|---|---|---|---|---|---|---|
| Unless otherwise specified; each switch sould be set as follows:<br>TAPE: NORMAL, DOLBY,: OFF, INPUT: LINE | | | | | | 0 dBs = 0.775 V | |
| I. Cassette mechanism section (REC/PB head adjustment) | | | | | | | |
| [1] | Demagnetization and cleaning | — | — | Power OFF, demagnetization, cleaning play | REC/PB head, erase head, capstan, pinch roller | Demagnetize the REC/PB head by head eraser. Clean the REC/PB head, erase head, capstan and pinch roller with a cotton swab immersed in alcohol. | |
| [2] | REC/PB head azimuth | MTT-114,<br>TCC-153<br>SCC-1727<br>−10 kHz,<br>−10 dB | (B) | PLAY | Azimuth adjustment screw | In a setting where the output is maximized, adjust the azimuth adjustment screw so that the Lissajous figure appearing on the oscilloscope screen comes near to a line slanted 45°.<br>Note: The head should be installed in such a manner that it approaches the tape face. | (a) |
| [3] | Tape speed | MTT-111<br>TCC-100<br>SCC-1727<br>3 kHz, −4 dB | (B) | PLAY ※ | Semi-fixed resistor in DC motor assembly | Adjust so that frequency is 3 kHz at the center of the tape. | (b) |
| II. PC board adjustemnt (X26-131: KX-5050, X26-132: KX3050) | | | | | | | |
| <1> | Playback level | MTT-150<br>400 Hz | (B) | PLAY | VR1 (L)<br>VR2 (R) | Adjust so that LINE OUT is −1.2 dBs. | |
| | | MTT-256<br>SCC-1727<br>315 Hz | | | | Adjust so that LINE OUT is −4.0 dBs. | |
| | | MTT-256U,<br>TCC-160 315 Hz | | | | Adjust so that LINE OUT is 0 dBs. | |
| <2> | Bias current | (A)<br>315kHz,<br>−30 dBs<br>10kHz, −30dBs | (B) | Adjust the REC VR (LEVEL, BALANCE) so that the REC monitor output is −20 dBs at 1 kHz, and record and playback 315 kHz and 10 kHz altemately. | VR31(L)<br>VR32(R) | Record 315 kHz and 10 kHz alternately, and adjust each bias current adjustment VR so that the 10 kHz play back level is +0.5 dB against 315 kHz. | |
| <3> | Recording level | (A)<br>315 kHz −10 dBs | (B) | Record and play back 315 kHz with the situation of above <3> kept as it is. | Deck A:<br>VR21 (L) VR22 (R) | Adjust the semi-fixed resistor for the 0 dB lighting up levels of the L and R sides to become the same. | |
| <4> | FL meter 0 dB | (A)<br>315 kHz,<br>−10 dBs | — | Adjust the REC VR (LEVEL, BALANCE) so that the REC PAUSE monitor output is −0 dBs at 315 kHz. | VR95(R) | Adjust so that "0 dB" lights, level of L and R and same. | |
| Note: On item <1> in "II. PC board adjustment" | | | | | | | |
| Although 3 kinds of tapes are set forth for the playback level adjustment, the use of one tape suffices for adjustment. Here is meant no necessity for the use of all these 3 kinds of tapes. Other than the abovementioned tapes, when a test tape equal in magnetic flux and frequency is available, the adjustment is feasible with this test tape by making the playback output suited to the specified output level of this tape in agreement with the adjustment method. | | | | | | | |

※ For your safety, remove the MECHANISM Assy with FRONT PANEL & PCB when you adjust tape speed.

# REGLAGE

| N° | ITEM | REGLAGE DE L'ENTREE | REGLAGE DE LA SORTIE | REGLAGE DU MAGNETOPHONE A CASSETTE | POINTS DE L'ALIGNEMENT | ALIGNER POUR | FIG. |
|---|---|---|---|---|---|---|---|
| Chaque commutateur doit être réglé comme suit, à moins d'indication contraire. 0 dBs = 0,775 V<br>TAPE: NORMAL, DOLBY: OFF, INPUT: LINE<br>I. Section de mécanisme de la cassette (ajustement de la tête d'enregistrement/lecture) | | | | | | | |
| [1] | Démagnétisation et nettoyage | — | — | Alimentation coupée, démagnétisation, nettoyage, lecture | Tête d'enregistrement/lecture, tête d'effacement, cabestan, galet presseur | Démagnétiser la tête d'enregistrement/lecture avec l'effaceur de tête. Nettoyer la tête d'enregistrement/lecture, la tête d'effacement, le cabestan et le galet presseur avec un coton-tige trempé dans de l'alcool. | |
| [2] | Azimut de la tête d'enregistrement/ lecture | SCC-1727<br>MTT-114,<br>TCC-153<br>10 kHz,<br>−10 dB | (B) | PLAY | Vis d'ajustement de l'azimut | Au réglage où la sortie est maximisée, ajuster la vis de réglage de l'azimut pour que la figure de Lissajous sur l'écran de l'oscilloscope soit proche d'une ligne inclinée sur 45°.<br>Remarque: La tête doit être installée de manière à ce qu'elle s'approche de la face de la bande. | (a) |
| [3] | Vitesse de la bande | SCC-1727<br>MTT-111.<br>TCC-100<br>3 kHz, −4 dB | (B) | ※<br>PLAY | Résistance semi-fixe dans l'ensemble du moteur CC. | Ajuster pour que la fréquence soit, 3 kHz au centre de la bande. | (b) |
| II. Ajustement de la plaquette de circuits imprimes (X26-131: KX-5050, X26-132: KX-3030) | | | | | | | |
| <1> | Niveau de lecture | MTT-150<br>TCC-130 400 Hz | (B) | PLAY | VR1 (L)<br>VR2 (R) | Ajuster pour que LINE OUT soit −1,2 dBs. | |
| | | MTT-256,<br>SCC-1727<br>315 Hz | | | | Ajuster pour que LINE OUT soit −4,0 dBs. | |
| | | MTT-256U,<br>TCC-160 315 Hz | | | | Ajuster pour que LINE OUT soit 0 dBs. | |
| <2> | Courant de polarisation | (A)<br>315 kHz,<br>−30 dBs<br>10 kHz,<br>−30 dBs | (B) | Ajuster la VR REC (LEVEL, BALANCE) pour que la sortie de contrôle REC soit −24 dBs à 1 kHz et l'enregistrement et la lecture 315 kHz et 10 kHz alternativement. | VR31(L)<br>VR32(R) | Enregistrer 315 kHz et 10 kHz alterrnativement et ajuster chaque VR d'ajustement de courant de polarisation pour que le niveau de lecture 10 kHz soit +0,5 dB contre 315 kHz. | |
| <3> | Niveau d'enregistrement | (A)<br>315 kHz, −10 dBs | (B) | Enregistrer et lire 315 kHz avec la situation de <2> ci-dessus gardée telle quelle. | Platine A:<br>VR21 (G), VR22 (R) | Ajuster la résistance semi-fixée pour le niveau d'éclairage 0 dB pour que les côtés L et R deviennent identiques. | |
| | Compteur fluorescent 0 dB | (A)<br>315 kHz,<br>−dBs | — | Ajuster la VR REC (LEVEL, BALANCE) pour que la sortie de contrôle REC PAUSE soit −0 dBs á 315 kHz. | VR95(R) | Ajuster pour que "0 dB" s'allume. | |
| Remarque: Sur le paragraphe <1> de II. Ajustement de la plaque de circuits imprimés. | | | | | | | |
| Bien que 3 sortes de bandes soient employées pour l'ajustement du niveau de lecture, l'utilisation d'une bande suffit pour l'ajustement. En plus des bandes citées ci-dessus, quand une bande test de flux magnétique et de fréquence égaux est disponible, l'ajustement est possible en réglant la sortie de lecture sur le niveau de sortie spécifique à cette bande, selon la méthode d'ajustement. | | | | | | | |

※ Pour des raisons de sécurité, déposer le mécanisme avec le panneau avant et le PCB pour régler la vitesse de la bande.

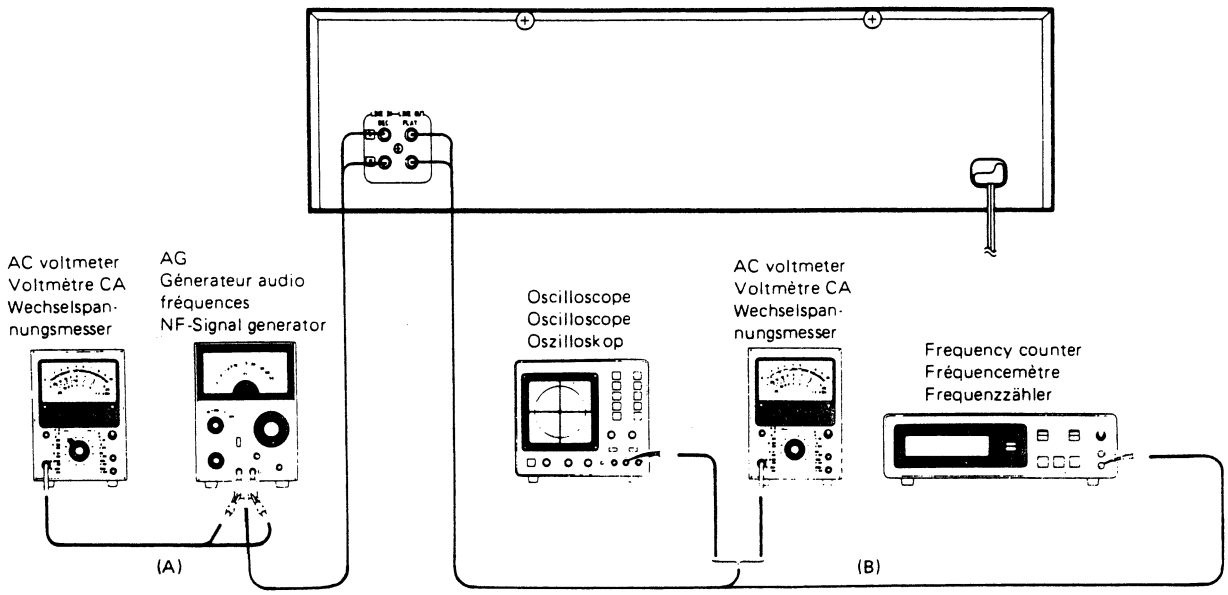
# ABGLEICH

| NR | GEGENSTAND | EINGANGS-EINSTELLUNG | AUSGANGS-EINSTELLUNG | KASSETTENGERÄT-EINSTELLUNG | ABGLEICH PUNKTE | ABGLEICHEN FÜR | ABB. |
|---|---|---|---|---|---|---|---|
| Falls nicht anders angegeben, müssen die einzelnen Schalter wie folgt eingestellt sein: 0 dBs = 0,775 V<br>TAPE: NORMAL, DOLBY: OFF, INPUT: LINE<br>I. Kassettenmechanismus-Abschnitt (Aufnahme/Wiedergabekopf-Einstellung) | | | | | | | |
| [1] | Entmagnetisierung und Reinigung | — | — | Spannungsversorgung aus, Entmagnetisierung, Reinigung, Wiedergabe | Aufnahme/ Wiedergabekopf, Löschkopf, Tonwelle, Andruckrolle | Den Aufnahme/Wiedergabekopf mit einem Entmagnetisierer entmagnetisieren. Den Aufnahme/ Wiedergabekopf, den Löschkopf, die Tonwelle und die Andruckrolle mit einem in Alkohol eingetauchten Wattestäbchen reinigen. | |
| [2] | Aufnahme/ Wiedergabekopf-Azimut | SCC-1727 MTT-114, TCC-153 10 kHz, −10 dB | (B) | PLAY | Azimut-Einstellschraube | Bei der Einstellung, bei der der Ausgang maximal ist, so einstellen, daß die auf die Azimut-Einstellschraube dem Oszilloskop-Bildschirm erscheinende Lissajousfigur nahe einer um 45° geneigten Linie kommt. Hinweis: Der Tonkopf muß so installiert sein, daß er zum Band weist. | (a) |
| [3] | Bandgeschwindigkeit | SCC-1727 MTT-111, TCC-100 3 kHz, −4 dB | (B) | PLAY ※ | semi-fester Wiederstand in der Gleichstrommotor-Einheit | So einstellen, daß die Frequenz in der Mitte des Bandes 3 kHz beträgt. | (b) |
| II. Platinen-Einstellung (X26-131: KX-5050, X26-132: KX-3050) | | | | | | | |
| <1> | Wiedergabepegel | MTT-150 400 Hz | (B) | PLAY | VR1 (L) VR2 (R) | So einstellen, daß LINE OUT −1,2 dBs beträgt. | |
| | | MTT-256, SCC-1727 315 Hz | | | | So einstellen, daß LINE OUT −4,0 dBs beträgt. | |
| | | MTT-256U, TCC-160 315 Hz | | | | So einstellen, daß LINE OUT 0 dBs beträgt. | |
| <2> | Vormagnetisierungsstrom | (A) 315 kHz, −30 dBs, 10kHz −30 dBs | (B) | Den REC-Regelwiderstand (LEVEL, BALANCE) so einstellen, daß der REC-Überwachungsausgang −24 dBs bei 1 kHz beträgt, und 315 kHz und 10 kHz abwechselnd aufnehmen und wiedergeben. | VR31(L) VR32(R) | 315 kHz und 10 kHz abwecselnd aufnehmen und jeden Vormagnetisierungsstrom-Einstellungs-Regelwiderstand so einstellen, daß der 10-kHz-Wiedergabepegel +0,5 dB gegen 315 kHz beträgt | |
| <3> | Aufnahmepegel | (A) 315 kHz, −10dBs | (B) | Unter Beibehaltung der obigen Situation <3> 315 kHz aufnehmen und wiedergeben. | Deck A: VR21 (L), VR22 (R) | Den Haldfestwiderstand so einstellen, daß die 0 dB-Aufleuchtpegel für die L- und die R-Seite idnetisch werden. | |
| <4> | FL-Meter 0 dB | (A) 315 kHz, −10 dBs | — | Den REC-Regelwiderstand (LEVEL, BALANCE) so einstellen, daß der REC PAUSE-Überwachungs-Ausgang −0 dBs bei 315 kHz beträgt. | VR95(R) | So einstellen, daß "0 dB" leuchtet. | |
| Hinweis: Zu Punkt <1> in "II. Platinen-Einstellung" | | | | | | | |
| Obwohl 3 Arten von Bändern für die Wiedergabepegel-Einstellung vorgegeben sind, reicht die Verwendung eines Bandes für die Einstellung aus. Das bedeutet, daß nicht alle 3 Arten Bänder verwendet werden brauchen. Wenn ein anderes Testband als die oben angeführten Bänder mit gleichen magnetischen Fluß und gleicher Frequenz verfügbar ist, kann die Einstellung mit diesem Testband durchgeführt werden, indem der Wiedergabe-Ausgang für den spezifizierten Ausgangspegel dieses Bandes in Übereinstimmung mit der Einstellmethode passend gemacht wird. | | | | | | | |

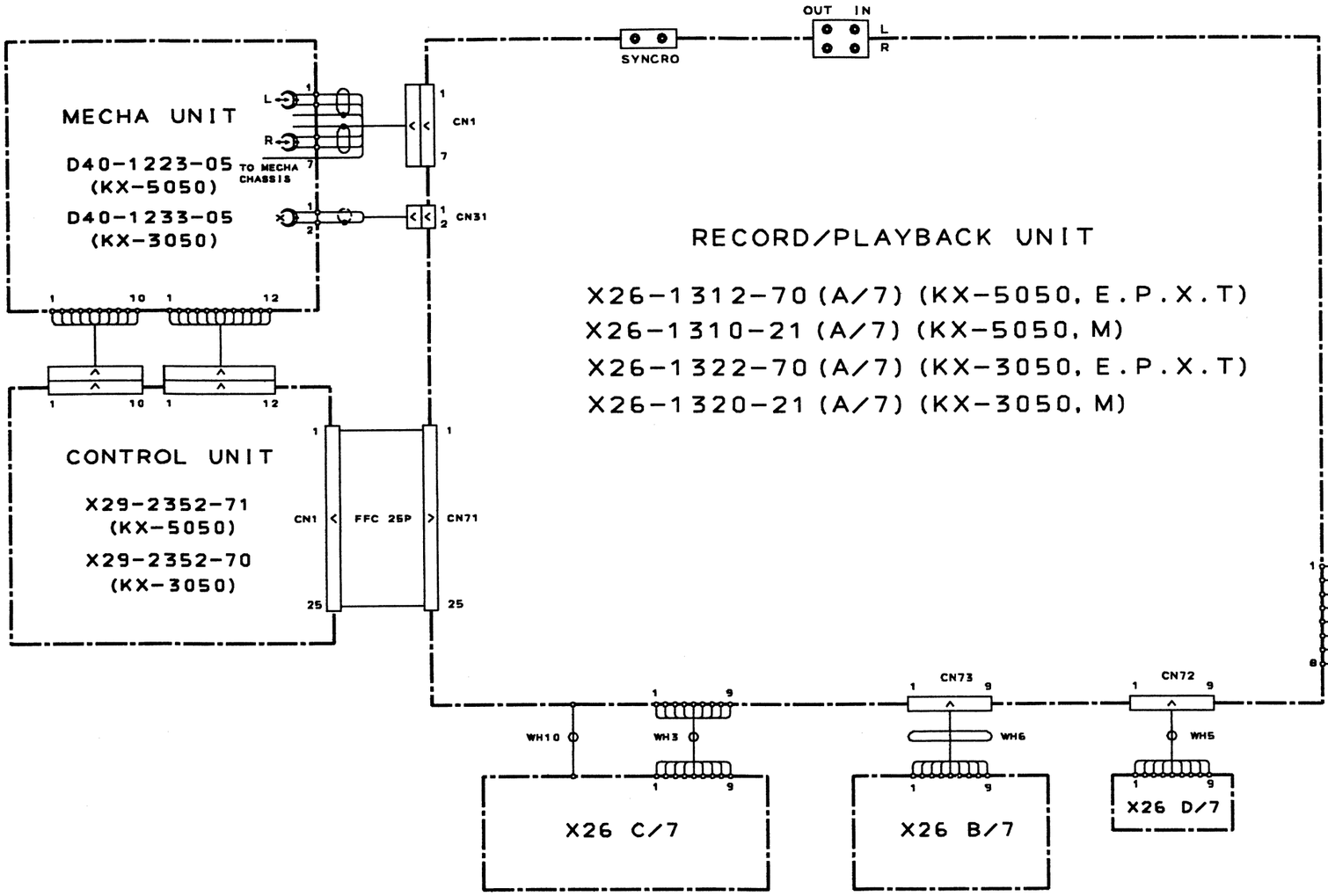
※ Zu Ihrer Sicherheit sollten Sie zum Einstellen der Bandgeschwindigkeit die Laufwerk-Baugruppe zusammen mit der Frontplatte und der Leiterplatte entfernen.

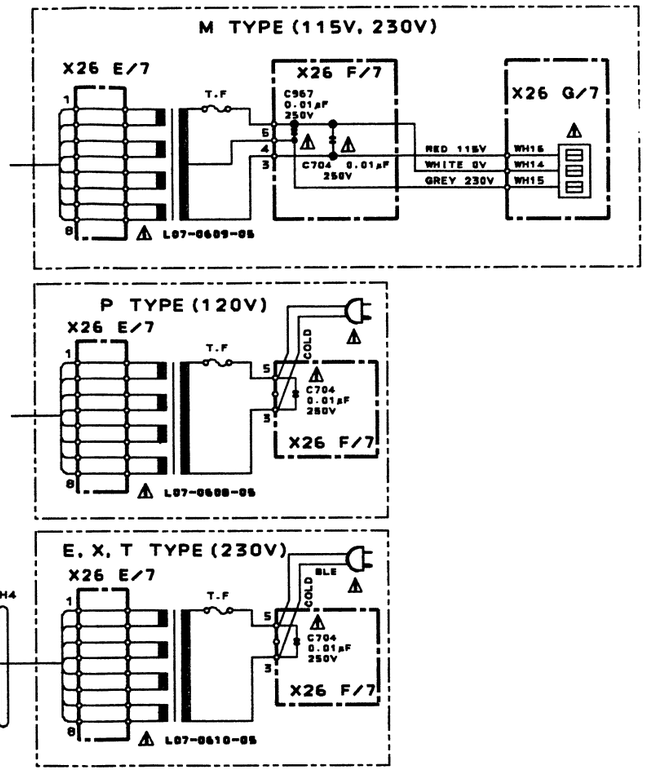
# ADJUSTMENT/REGLAGE/ABGLEICH

## Measurement Equipment Connections:



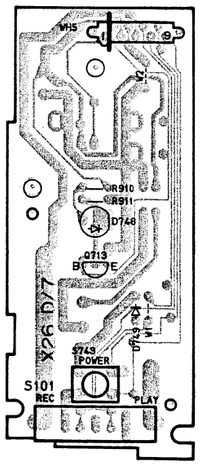
# WIRING DIAGRAM

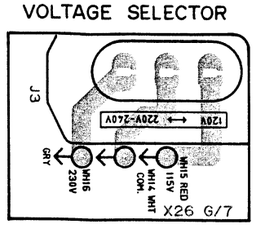


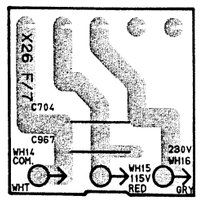



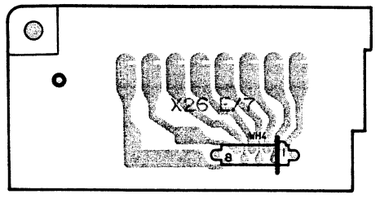
# PC BOARD (Component side view)

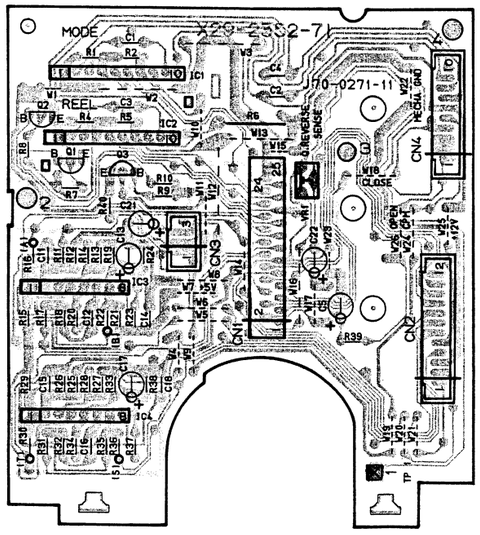
(KX-3050)

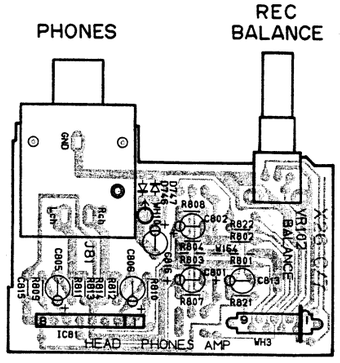


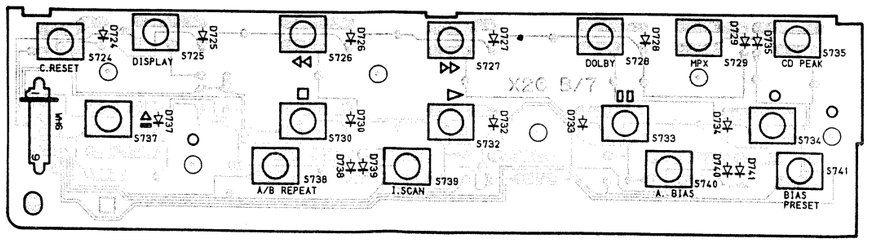



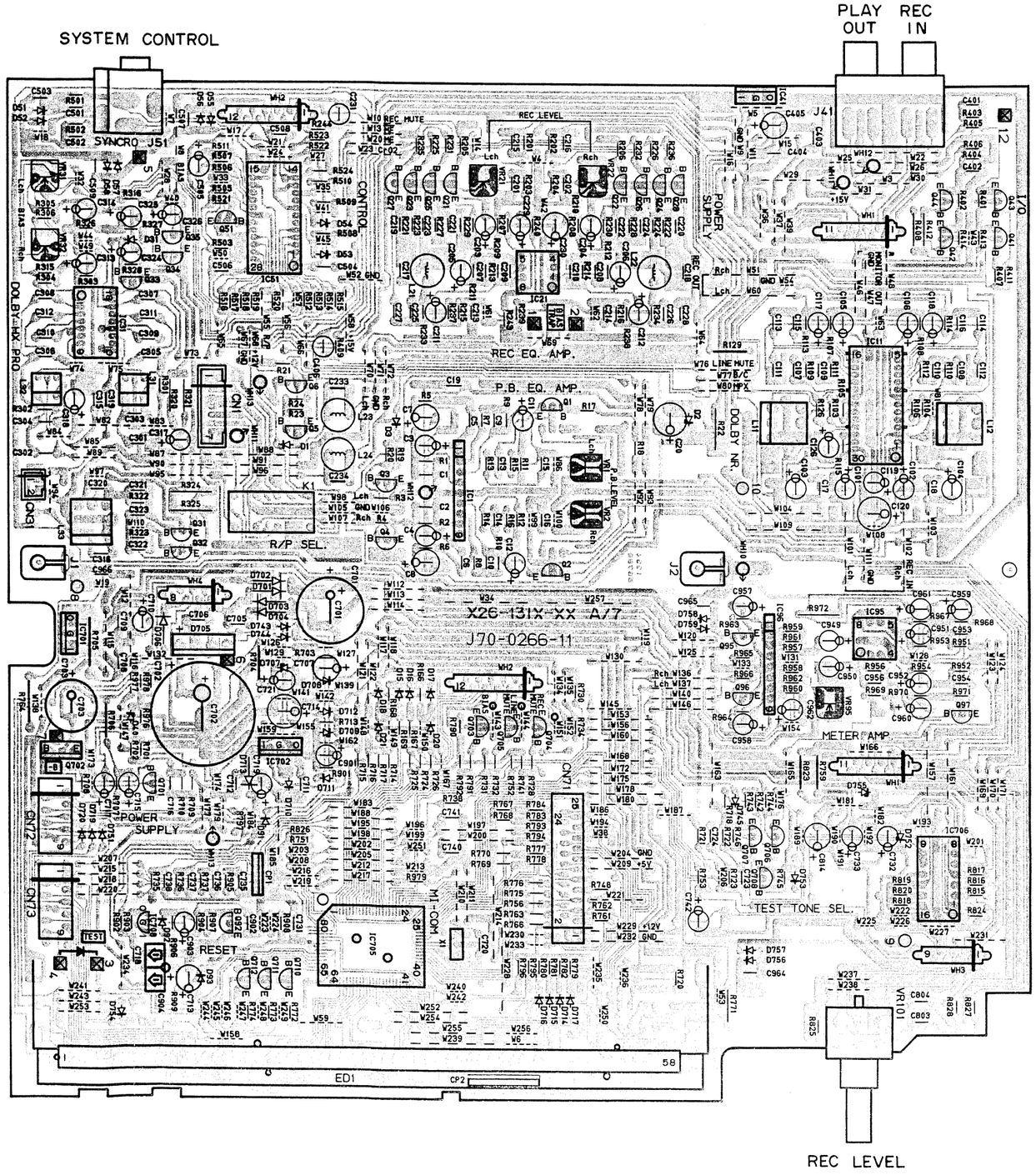



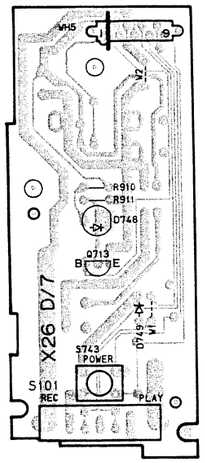




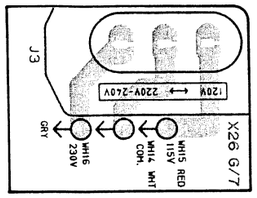

Refer to the schematic diagram for the values of resistors and capacitors.

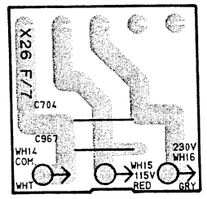
# PC BOARD (Component side view)

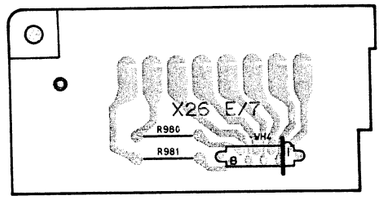
(KX-5050)

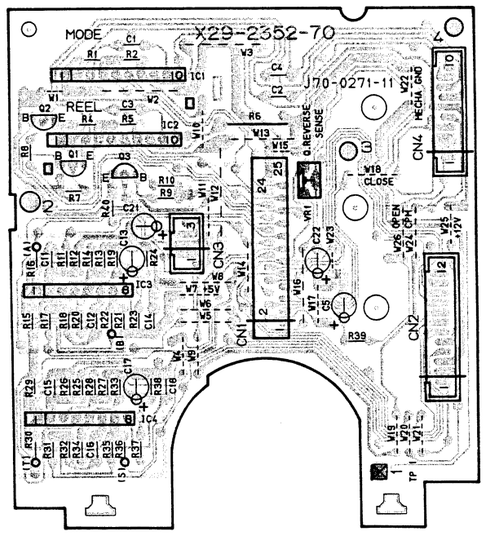



VOLTAGE SELECTOR



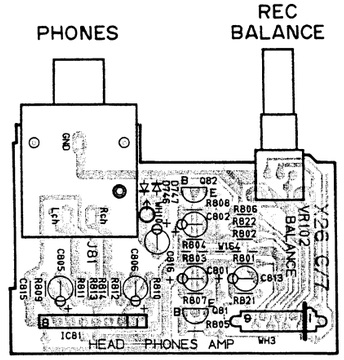



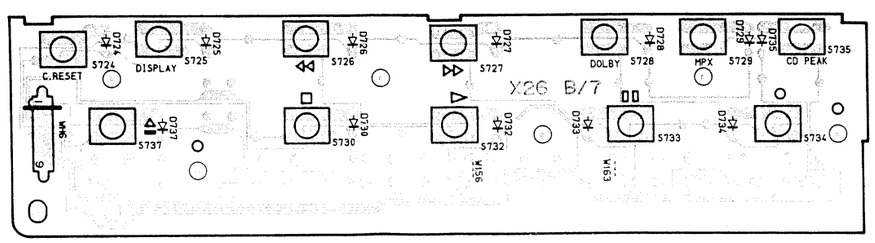




PHONES

REC BALANCE

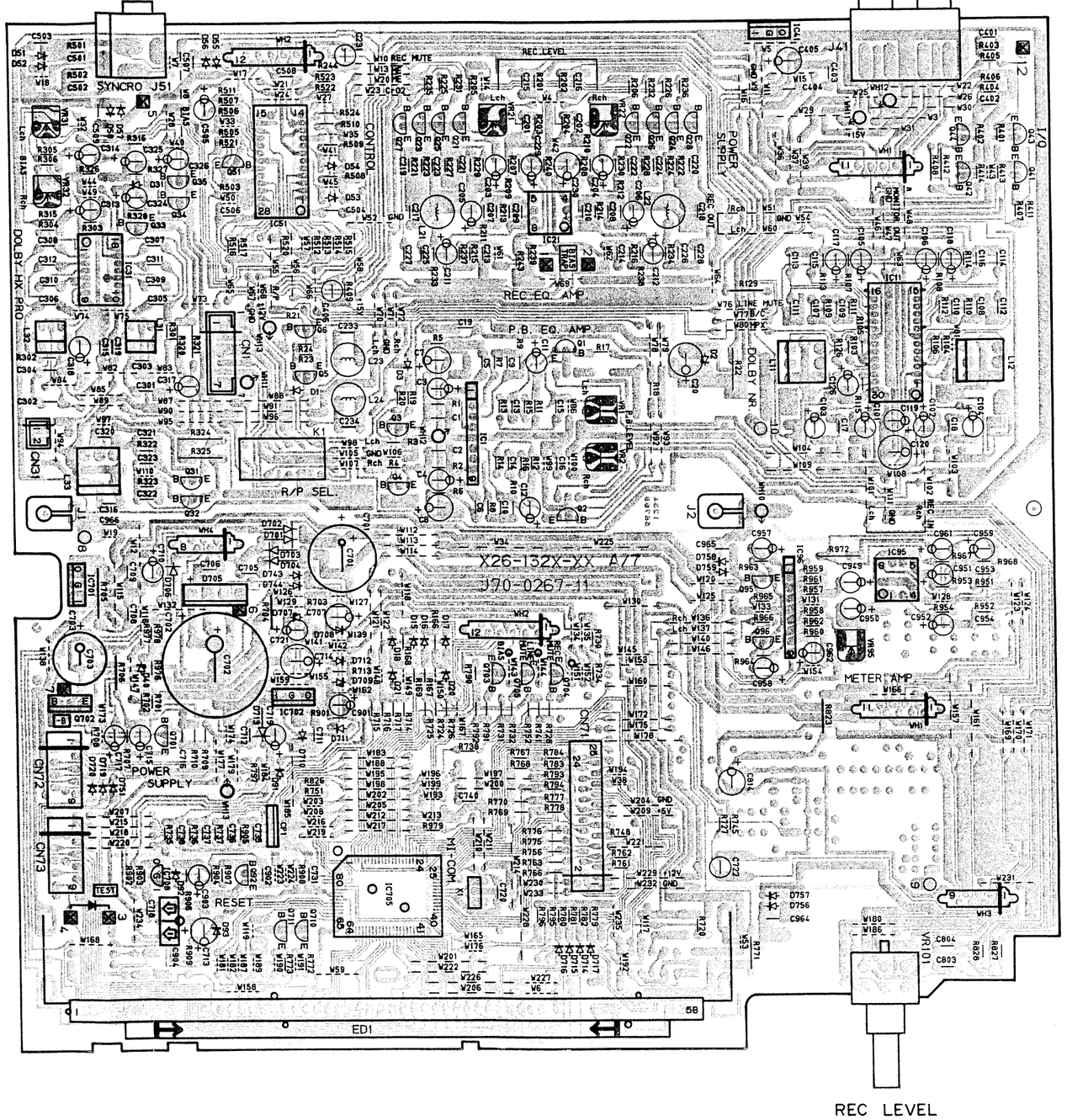



SYSTEM CONTROL

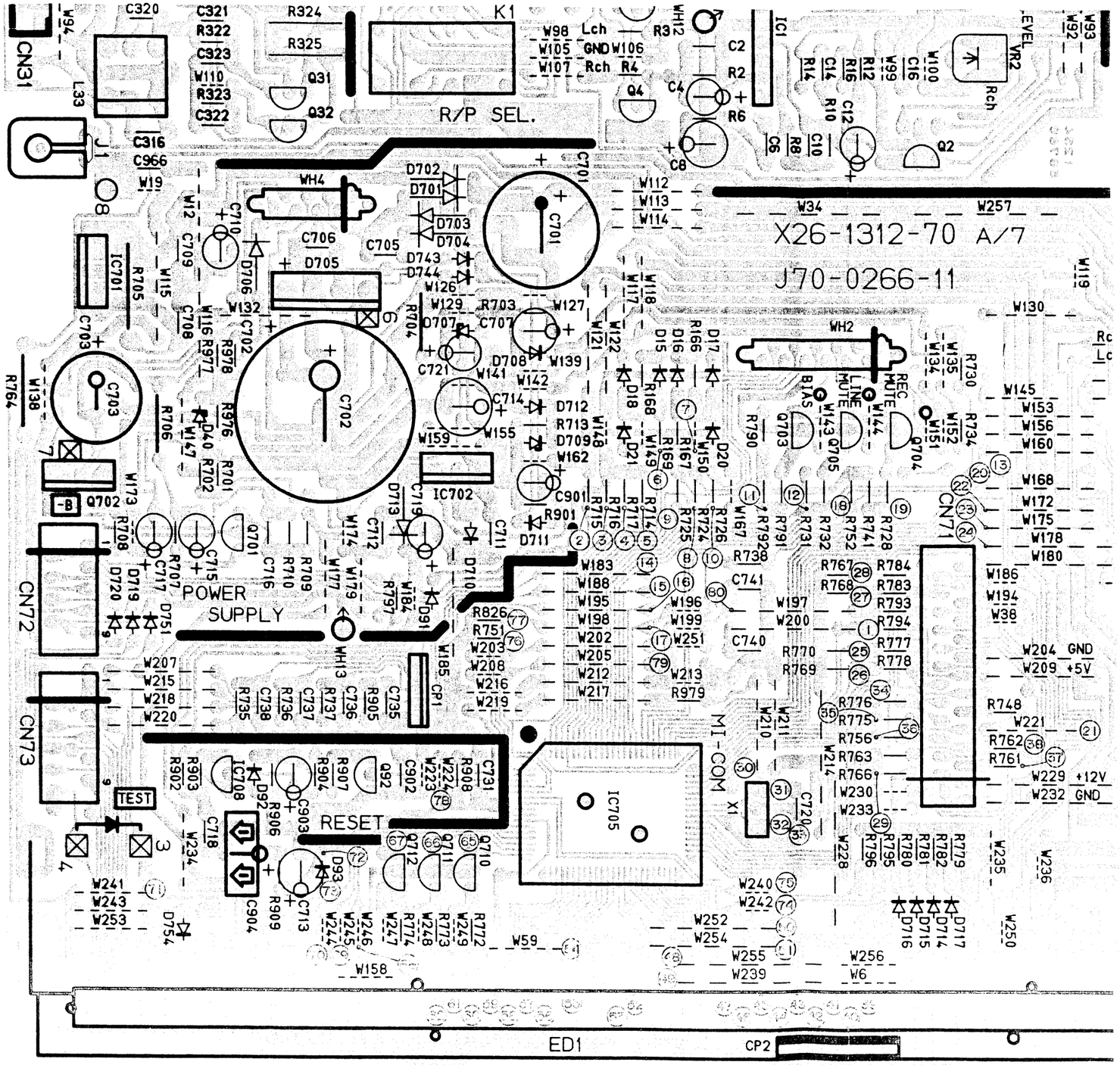
PLAY OUT

REC IN




Refer to the schematic diagram for the values of resistors and capacitors.

# Microprocessor test point (Componentside view)



(X26-1322-70) (A/7) (E.P.X.T TYPE)
(X26-1320-21) (A/7) ( M TYPE)

D40-1233-05

IC1 : BA6209
IC2 : BA6229
IC3, 4 : BA10393N
Q1, 2 : UN4219 or DTC113ZS
Q3 : 2SC3246

(X29-2352-70)

HSS104 RD3.9ES
HSS104A RD5.1JS
HZS11N RD6.2ES
HZS3.9N S5688B
HZS5.1S 1SR139-100
HZS6.2N 1SS131
RD11ES 1SS133

2SB1375

TC4053BP

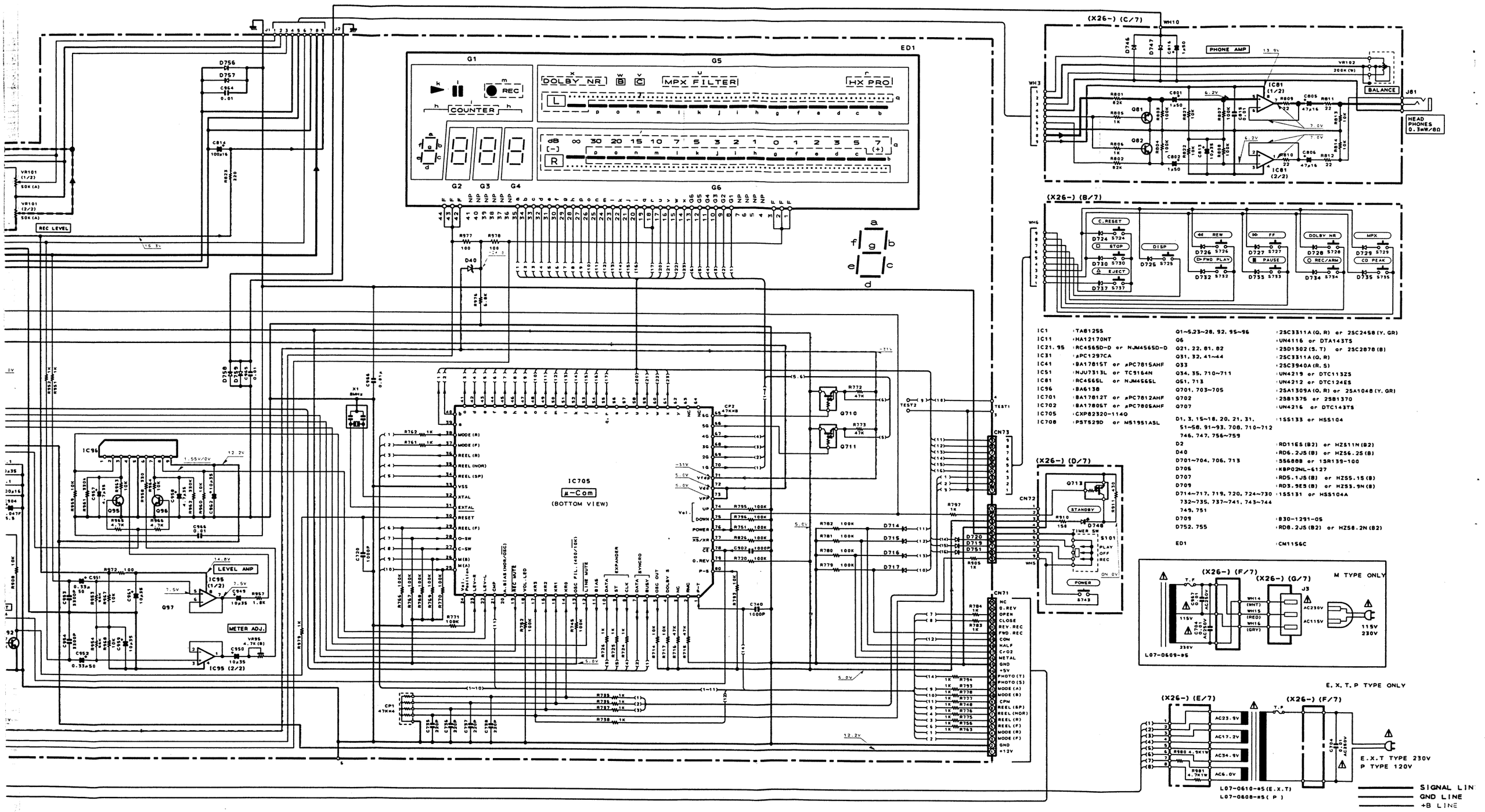
BA6138

M51951ASL
PST529D

BA10393N

UPC1297CA

DC voltages are as meas
ter with a cassette loade
slightly due to variatio
or/and units. Bias circuit
the record mode.




| | | | |
|---|---|---|---|
| IC1 | : TA8125S | Q1~5,23~28, 92, 95~96 | : 2SC3311A (Q, R) or 2SC2458 (Y, GR) |
| IC11 | : HA12170NT | Q6 | : UN4116 or DTA143TS |
| IC21, 95 | : RC4565D-D or NJM4565D-D | Q21, 22, 81, 82 | : 2SD1302 (S, T) or 2SC2878 (B) |
| IC31 | : µPC1297CA | Q31, 32, 41~44 | : 2SC3311A (Q, R) |
| IC41 | : BA17815T or µPC7815AHF | Q33 | : 2SC3940A (R, S) |
| IC51 | : NJU7313L or TC9164N | Q34, 35, 710~711 | : UN4219 or DTC113ZS |
| IC81 | : RC4565L or NJM4565L | Q51, 713 | : UN4212 or DTC124ES |
| IC96 | : BA6138 | Q701, 703~705 | : 2SA1309A (Q, R) or 2SA1048 (Y, GR) |
| IC701 | : BA17812T or µPC7812AHF | Q702 | : 2SB1375 or 2SB1370 |
| IC702 | : BA17805T or µPC7805AHF | Q707 | : UN4216 or DTC143TS |
| IC705 | : CXP82320-1140 | D1, 3, 15~18, 20, 21, 31, 51~58, 91~93, 708, 710~712, 746, 747, 756~759 | : 1SS133 or HSS104 |
| IC708 | : PST529D or M51951ASL | D2 | : RD11ES (B2) or HZS11N (B2) |
| | | D40 | : RD6.2JS (B) or HZS6.25 (B) |
| | | D701~704, 706, 713 | : 356888 or 1SR139-100 |
| | | D705 | : KBP02NL-6127 |
| | | D707 | : RD5.1JS (B) or HZS5.1S (B) |
| | | D709 | : RD3.9ES (B) or HZS3.9N (B) |
| | | D714~717, 719, 720, 724~730, 732~735, 737~741, 743~744, 749, 751 | : 1SS131 or HSS104A |
| | | D709 | : B30-1291-05 |
| | | D752, 755 | : RD8.2JS (B2) or HZS8.2N (B2) |
| | | ED1 | : CN1156C |

DC voltages are as measured with a high impedance voltmeter with a cassette loaded at playback mode. Values may vary slightly due to variations between individual instruments or/and units. Bias circuit DC voltages are as measured while in the record mode.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance, une cassette étant insérée en mode du lecture. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.
Les tensions c.c. du circuit de polarité doivent être mesurées, l'appareil étant en mode d'enregistrement.

Die angegebenen Gleichspannungswerte wurden bei eingesetzter Cassette in der Wiedergabe mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig. Die angegebenen Gleichspannungswerte der Vormagnetisierungsschaltung wurden in der Aufnahme-Betriebsart gemessen.

**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

KX-3050

# KX-3050
KENWOOD

(X26-1312-70) (A/7) (E.P.X.T TYPE)
(X26-1310-21) (A/7) ( M TYPE)

D40-1223-05

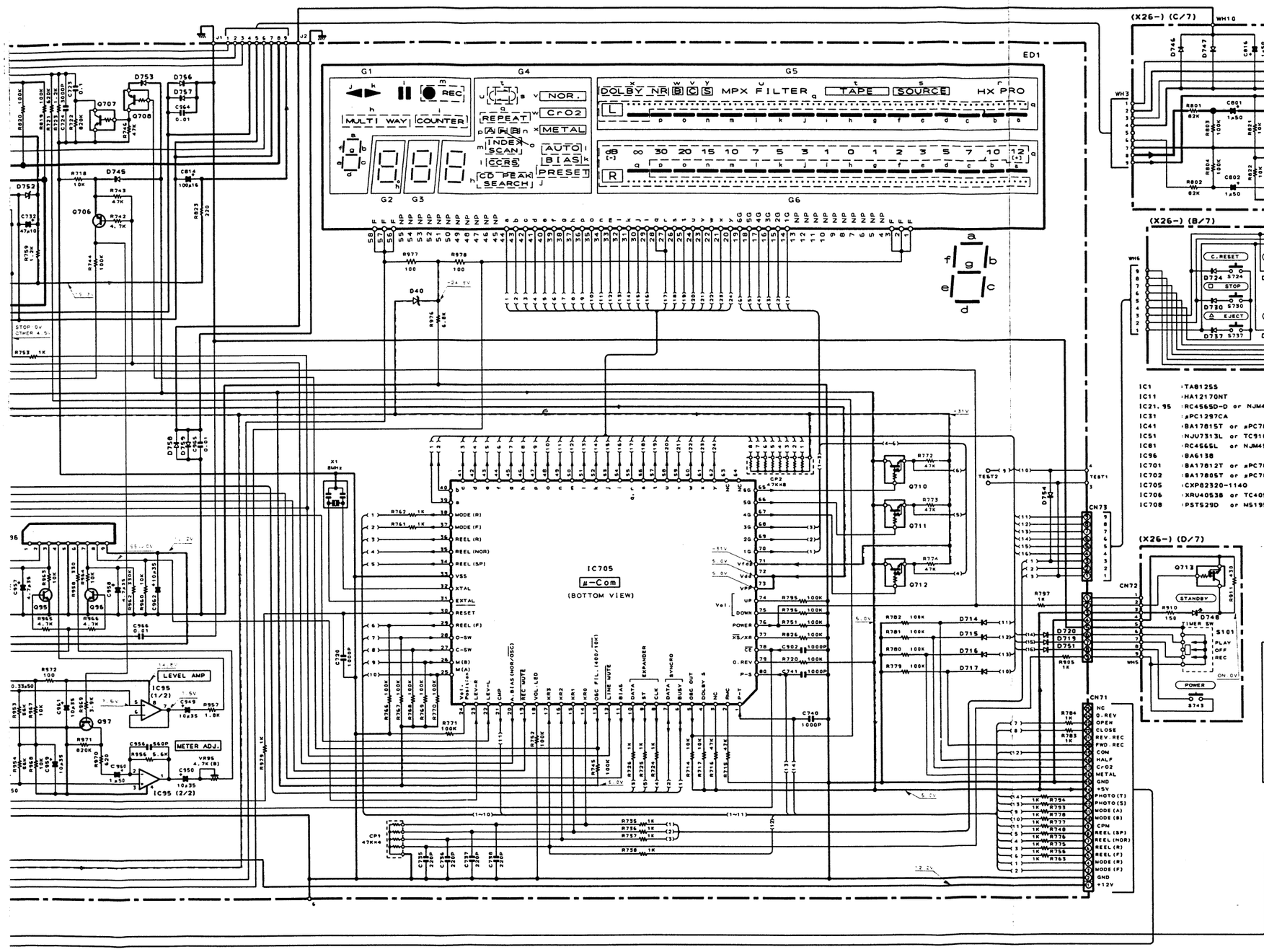
IC1 : BA6209
IC2 : BA6229
IC3, 4 : BA10393N
Q1, 2 : UN4219 or DTC113ZS
Q3 : 2SC3246

(X29-2352-71)

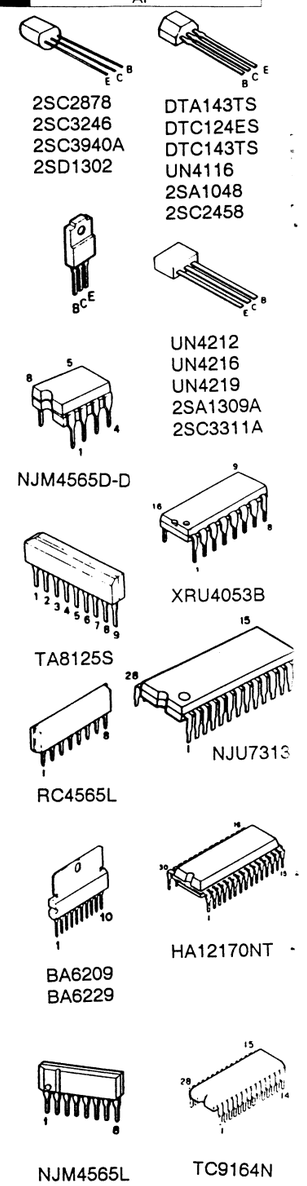
DC voltages are as measured with a high impedance voltmeter with a cassette loaded at playback mode. Values may vary slightly due to variations between individual instruments or/and units. Bias circuit DC voltages are as measured while in the record mode.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance, une cassette étant insérée en mode du lecture. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.
Les tensions c.c. du circuit de polarité doivent être mesurées, l'appareil étant en mode d'enregistrement.

Die angegebenen Gl
setzter Cassette in d
Spannungsmesser g
werte aufgrund von
strumenten oder Ger
Gleichspannungswer
wurden in der Aufnah




| | | | |
|---|---|---|---|
| IC1 | :TA8125S | Q1~5,23~28, 92, 95~97 | :2SC3311A (Q, R) or 2SC2458 (Y, GR) |
| IC11 | :HA12170NT | Q6, 708 | :UN4116 or DTA143TS |
| IC21, 95 | :RC4565D-D or NJM4565D-D | Q21, 22 | :2SD1302 (S, T) or 2SC2878 (B) |
| IC31 | :μPC1297CA | Q31, 32, 41~44 | :2SC3311A (Q, R) |
| IC41 | :BA17815T or μPC7815AHF | Q33 | :2SC3940A (R, S) |
| IC51 | :NJU7313L or TC9164N | Q34, 35, 710~712 | :UN4219 or DTC113ZS |
| IC61 | :RC4565L or NJM4565L | Q51, 713 | :UN4212 or DTC124ES |
| IC96 | :BA6138 | Q701, 703~706 | :2SA1309A (Q, R) or 2SA1048 (Y, GR) |
| IC701 | :BA17812T or μPC7812AHF | Q702 | :2SB1375 or 2SB1370 |
| IC702 | :BA17805T or μPC7805AHF | Q707 | :UN4216 or DTC143TS |
| IC705 | :CXP82320-114Q | D1, 3, 15~18, 20, 21, 31, 51~58, 91~93, 708, 710~712 745~747, 753, 756~759 | :1SS133 or HSS104 |
| IC706 | :XRU40538 or TC40538P | D2 | :RD11ES (B2) or HZS11N (B2) |
| IC708 | :PST529D or MS1951ASL | D40 | :RD7.5JS (B) or HZS7.5S (B) |
| | | D701~704, 706, 713 | :1SS688 or 1SR139-100 |
| | | D705 | :KBP02ML-G127 |
| | | D707 | :RD5.1JS (B) or HZS5.1S (B) |
| | | D709 | :RD3.9ES (B) or HZS3.9N (B) |
| | | D714~717, 719, 720, 724~730 732~735, 737~741, 743~744 749, 751, 754 | :1SS131 or HSS104A |
| | | D709 | :B30-1291-05 |
| | | D752, 755 | :RD8.2JS (B2) or HZS8.2N (B2) |
| | | ED1 | :CM1157C |



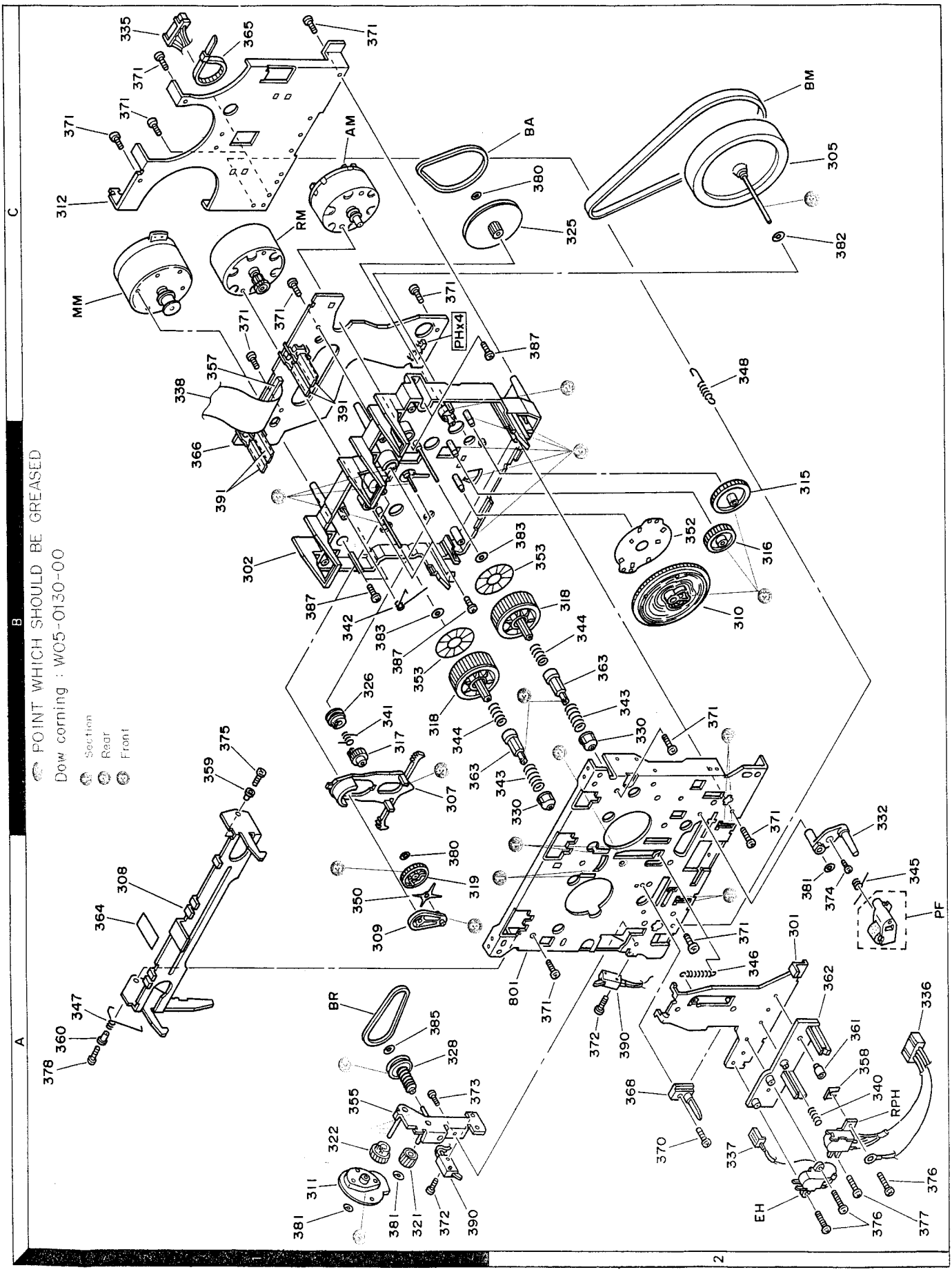

Die angegebenen Gleichspannungswerte wurden bei eingesetzter Cassette in der Wiedergabe mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig. Die angegebenen Gleichspannungswerte der Vormagnetisierungsschaltung wurden in der Aufnahme-Betriebsart gemessen.

**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

# KX-5050

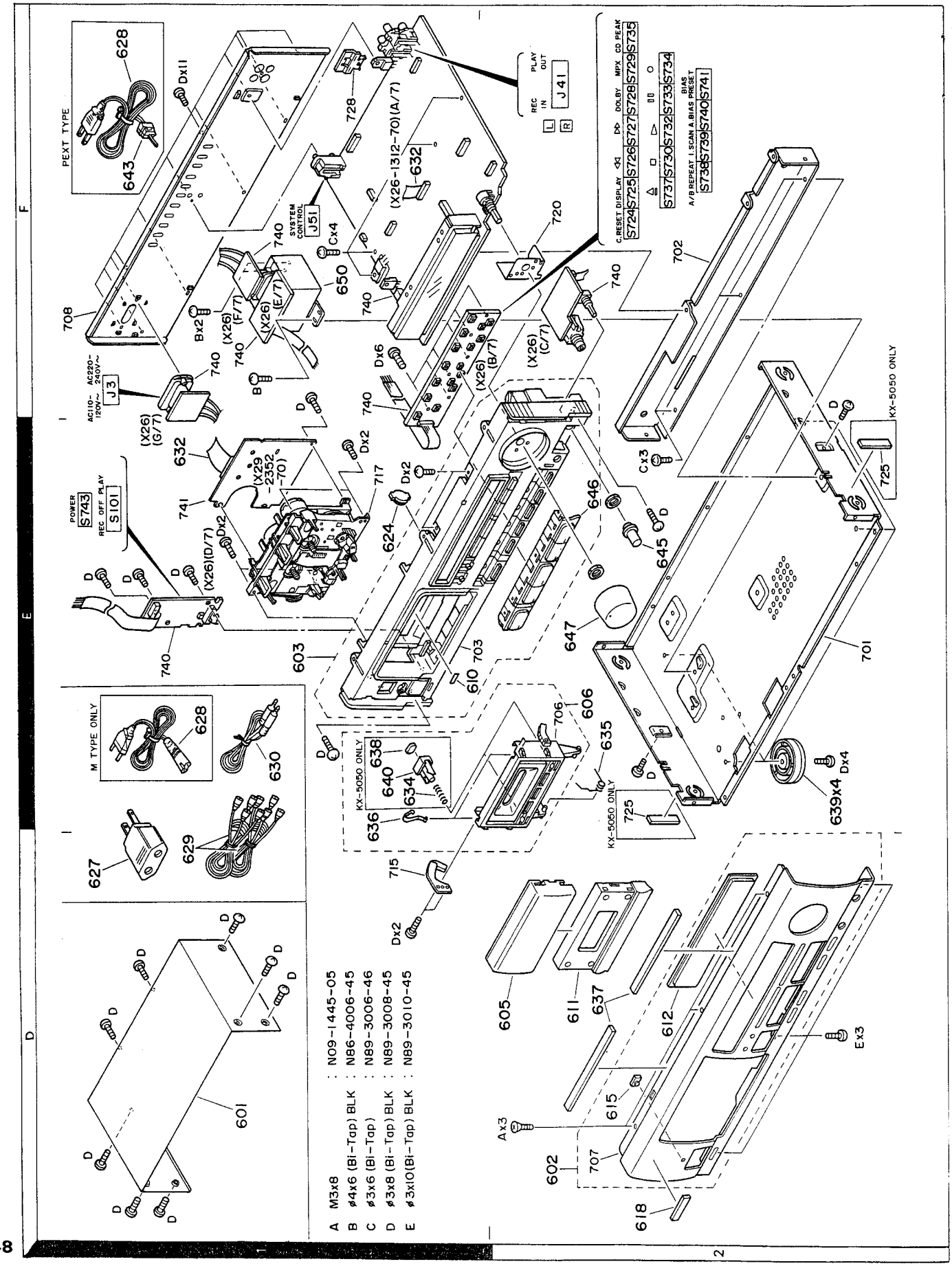
KENWOOD

# EXPLODED VIEW (MECHANISM UNIT)




Parts with the exploded numbers larger than 700 are not supplied.

# EXPLODED VIEW (UNIT)


PEXT TYPE
M TYPE ONLY
KX-5050 ONLY
A M3x8 : N09-1445-05
B ø4x6 (Bi-Tap) BLK : N86-4006-45
C ø3x6 (Bi-Tap) : N89-3006-46
D ø3x8 (Bi-Tap) BLK : N89-3008-45
E ø3x10(Bi-Tap) BLK : N89-3010-45

# PARTS LIST

* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

| Ref. No. 参照番号 | Address 位置 | New Parts 新 | Parts No. 部品番号 | Description 部品名／規格 | Destination 仕向 | Remarks 備考 |
|---|---|---|---|---|---|---|
| | | | KX-3050 | | | |
| 601 | 1D | * | A01-2974-01 | METALLIC CABINET | | |
| 602 | 2D | * | A60-0237-03 | PANEL ASSY | | |
| 603 | 1E | * | A22-1563-02 | SUB PANEL ASSY | | |
| 605 | 2D | * | A53-1370-03 | CASSETTE LID | | |
| 606 | 2E | * | A53-1371-03 | CASSETTE HOLDER ASSY | | |
| 610 | 1E | | B03-1691-04 | DRESSING SEAL | | |
| 611 | 2D | * | B03-2776-03 | DRESSING PLATE | | |
| 612 | 2D | * | B10-1942-04 | FRONT GLASS | | |
| 615 | 2D | | B12-0162-04 | INDICATOR | | |
| 618 | 2D | | B43-0287-04 | KENWOOD BADGE | | |
| - | | | B46-0096-33 | WARRANTY CARD | X | |
| - | | | B46-0121-13 | WARRANTY CARD | P | |
| - | | | B46-0122-23 | WARRANTY CARD | E | |
| - | | | B46-0143-13 | WARRANTY CARD | T | |
| - | | * | B60-0876-00 | INSTRUCTION MANUAL (ENGLISH) | | |
| - | | * | B60-0877-00 | INSTRUCTION MANUAL (FRENCH) | EP | |
| - | | * | B60-0878-00 | INSTRUCTION MANUAL (SPANISH) | M | |
| - | | * | B60-0879-00 | INSTRUCTION MANUAL (GE,DU,IT) | E | |
| 624 | 1E | | D39-0200-05 | DAMPER | | |
| ⚠ 627 | 1D | | E03-0115-05 | AC PLUG ADAPTER | M | |
| ⚠ 628 | 1F | | E30-0459-05 | AC POWER CORD | E | |
| ⚠ 628 | 1F | | E30-0996-05 | AC POWER CORD | P | |
| ⚠ 628 | 1E | | E30-1329-15 | AC POWER CORD (INLET) | M | |
| ⚠ 628 | 1F | | E30-1341-05 | AC POWER CORD | X | |
| ⚠ 628 | 1F | | E30-1416-05 | AC POWER CORD | T | |
| 629 | 1D | | E30-0505-05 | AUDIO CORD | | |
| 630 | 1E | | E30-0977-05 | CORD WITH PLUG | | |
| 632 | 1E,1F | * | E35-0407-05 | FLAT CABLE X26 CN71-X29 CN1 | | |
| 635 | 2E | * | G01-3504-04 | TORSION COIL SPRING | | |
| 636 | 1E | * | G02-1008-04 | FLAT SPRING | | |
| 637 | 2D | | G11-0185-04 | SOFT TAPE (120X5X2) | | |
| | | * | H50-0343-04 | ITEM CARTON CASE | | |
| - | | * | H10-5312-02 | POLYSTYRENE FOAMED FIXTURE | | |
| - | | * | H10-5313-02 | POLYSTYRENE FOAMED FIXTURE | | |
| - | | | H20-0554-04 | PROTECTION COVER | M | |
| - | | | H25-0232-04 | PROTECTION BAG (235X350X0.03) | EXPM | |
| - | | | H25-0330-04 | PROTECTION BAG | EXP | |
| - | | | H25-0651-04 | PROTECTION BAG (0232 PRINTED) | T | |
| - | | | H25-0658-04 | PROTECTION BAG (0330 PRINTED) | T | |
| 639 | 2E | | J02-1034-05 | FOOT | | |
| ⚠ 643 | 1F | | J42-0083-05 | POWER CORD BUSHING | EXPT | |
| 645 | 2E | | K29-4332-04 | KNOB REC BALANCE | | |
| 646 | 2E | * | K29-4410-03 | KNOB DECK CONTROL | | |
| 647 | 2E | * | K29-4411-04 | KNOB REC LEVEL | | |
| ⚠ 650 | 1F | * | L07-0608-05 | POWER TRANSFORMER | P | |
| ⚠ 650 | 1F | * | L07-0609-05 | POWER TRANSFORMER | M | |
| ⚠ 650 | 1F | * | L07-0610-05 | POWER TRANSFORMER | EXT | |
| A | 2D | | N09-1445-05 | SET SCREW (M3X8) | | |
| B | 1F | | N86-4006-45 | BINDING HEAD TAPTITE SCREW | | |
| C | 2E,1F | | N89-3006-46 | BINDING HEAD TAPTITE SCREW | | |

L:Scandinavia K:USA P:Canada
Y:PX(Far East, Hawaii) T:England E:Europe
Y:AAFES(Europe) X:Australia M:Other Areas

⚠ indicates safety critical components.

# PARTS LIST

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| Ref. No. 参照番号 | Address 位置 | New Parts 新 | Parts No. 部品番号 | Description 部品名／規格 | Destination 仕向 | Remarks 備考 |
|---|---|---|---|---|---|---|
| D | 1D,1E | | N89-3008-45 | BINDING HEAD TAPTITE SCREW | | |
| E | 2D | | N89-3010-45 | BINDING HEAD TAPTITE SCREW | | |
| | | | **KX-5050** | | | |
| 601 | 1D | * | A01-2974-01 | METALLIC CABINET | | |
| 602 | 2D | * | A60-0235-03 | PANEL ASSY | | |
| 603 | 1E | * | A22-1563-02 | SUB PANEL ASSY | | |
| 605 | 2D | * | A53-1367-03 | CASSETTE LID | | |
| 606 | 2E | * | A53-1368-03 | CASSETTE HOLDER ASSY | | |
| 610 | 1E | | B03-1691-04 | DRESSING SEAL | | |
| 611 | 2D | * | B03-2776-03 | DRESSING PLATE | | |
| 612 | 2D | * | B10-1924-04 | FRONT GLASS | | |
| 615 | 2D | | B12-0162-04 | INDICATOR | | |
| 618 | 2D | | B43-0287-04 | KENWOOD BADGE | | |
| - | | | B46-0096-33 | WARRANTY CARD | X | |
| - | | | B46-0121-13 | WARRANTY CARD | P | |
| - | | | B46-0122-23 | WARRANTY CARD | E | |
| - | | | B46-0143-13 | WARRANTY CARD | T | |
| - | | * | B60-0873-00 | INSTRUCTION MANUAL (ENGLISH) | | |
| - | | * | B60-0874-00 | INSTRUCTION MANUAL (FRENCH) | EP | |
| - | | * | B60-0875-00 | INSTRUCTION MANUAL (GE,DU,IT) | E | |
| - | | * | B60-1001-00 | INSTRUCTION MANUAL (SPANISH) | M | |
| 624 | 1E | | D39-0200-05 | DAMPER | | |
| ⚠ 627 | 1D | | E03-0115-05 | AC PLUG ADAPTER | M | |
| ⚠ 628 | 1F | | E30-0459-05 | AC POWER CORD | E | |
| ⚠ 628 | 1F | | E30-0996-05 | AC POWER CORD | P | |
| ⚠ 628 | 1E | | E30-1329-15 | AC POWER CORD (INLET) | M | |
| ⚠ 628 | 1F | | E30-1341-05 | AC POWER CORD | X | |
| ⚠ 628 | 1F | | E30-1416-05 | AC POWER CORD | T | |
| 629 | 1D | | E30-0505-05 | AUDIO CORD | | |
| 630 | 1E | | E30-0977-05 | CORD WITH PLUG | | |
| 632 | 1E,1F | * | E35-0407-05 | FLAT CABLE X26 CN71-X29 CN1 | | |
| 634 | 1E | * | G01-3503-04 | COMPRESSION SPRING | | |
| 635 | 2E | * | G01-3504-04 | TORSION COIL SPRING | | |
| 636 | 1E | * | G02-1008-04 | FLAT SPRING | | |
| 637 | 2D | | G11-0185-04 | SOFT TAPE (120X5X2) | | |
| 638 | 1E | | G11-1334-04 | CUSHION | | |
| | | * | H50-0342-04 | ITEM CARTON CASE | | |
| - | | * | H10-5312-02 | POLYSTYRENE FOAMED FIXTURE | | |
| - | | * | H10-5313-02 | POLYSTYRENE FOAMED FIXTURE | | |
| - | | | H20-0554-04 | PROTECTION COVER | M | |
| - | | | H25-0232-04 | PROTECTION BAG (235X350X0.03) | EPMX | |
| - | | | H25-0330-04 | PROTECTION BAG | EPX | |
| - | | | H25-0651-04 | PROTECTION BAG (0232 PRINTED) | T | |
| - | | | H25-0658-04 | PROTECTION BAG (0330 PRINTED) | T | |
| 639 | 2E | | J02-1034-05 | FOOT | | |
| 640 | 1E | | J11-0140-04 | CLAMPER ASSY | | |
| ⚠ 643 | 1F | | J42-0083-05 | POWER CORD BUSHING | EPXT | |
| 645 | 2E | | K29-4332-04 | KNOB REC BALANCE | | |
| 646 | 2E | * | K29-4410-03 | KNOB DECK CONTROL | | |
| 647 | 2E | * | K29-4411-04 | KNOB REC LEVEL | | |
| ⚠ 650 | 1F | * | L07-0608-05 | POWER TRANSFORMER | P | |
| ⚠ 650 | 1F | * | L07-0609-05 | POWER TRANSFORMER | M | |

L:Scandinavia K:USA P:Canada
Y:PX(Far East, Hawaii) T:England E:Europe
Y:AAFES(Europe) X:Australia M:Other Areas

⚠ indicates safety critical components.



KX-3050/5050

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| Ref. No. 参照番号 | Address 位置 | New Parts 新 | Parts No. 部品番号 | Description 部品名／規格 | Destination 仕向 | Remarks 備考 |
|---|---|---|---|---|---|---|
| ⚠ 650 | 1F | * | L07-0610-05 | POWER TRANSFORMER | EXT | |
| A | 2D | | N09-1445-05 | SET SCREW (M3X8) | | |
| B | 1F | | N86-4006-45 | BINDING HEAD TAPTITE SCREW | | |
| C | 2E,1F | | N89-3006-46 | BINDING HEAD TAPTITE SCREW | | |
| D | 1D,1E | | N89-3008-45 | BINDING HEAD TAPTITE SCREW | | |
| E | 2D | | N89-3010-45 | BINDING HEAD TAPTITE SCREW | | |
| | | | **RECORD/PLAYBACK AMP UNIT (X26-13XX-XX)** | | | |
| D748 | | | B30-1291-05 | LED(LN21CPSLX(V)-(TA4)) | | |
| C1 ,2 | | | CK45FB1H681K | CERAMIC 680PF K | | |
| C3 ,4 | | | CE04KW1V100M | ELECTRO 10UF 35WV | | |
| C5 ,6 | | | CC45FSL1H221J | CERAMIC 220PF J | | |
| C7 ,8 | | | CE04KW1E101M | ELECTRO 100UF 25WV | | |
| C9 ,10 | | | CF92FV1H153J | MF 0.015UF J | | |
| C11 ,12 | | | CE04KW1V100M | ELECTRO 10UF 35WV | | |
| C13 ,14 | | | CF92FV1H183J | MF 0.018UF J | | |
| C15 ,16 | | | CK45FB1H102K | CERAMIC 1000PF K | | |
| C17 ,18 | | | CK45FB1H391K | CERAMIC 390PF K | | |
| C19 | | | CF92FV1H473J | MF 0.047UF J | | |
| C20 | | | CE04KW1C331M | ELECTRO 330UF 16WV | | |
| C101,102 | | | CE04KW1V100M | ELECTRO 10UF 35WV | | |
| C103,104 | | | CE04KW1V4R7M | ELECTRO 4.7UF 35WV | | |
| C105,106 | | | CE04KW1V100M | ELECTRO 10UF 35WV | | |
| C107-112 | | | CF92FV1H222J | MF 2200PF J | | |
| C113-116 | | | CF92FV1H104J | MF 0.10UF J | | |
| C117,118 | | | CE04KW1V100M | ELECTRO 10UF 35WV | | |
| C119 | | | CE04KW1V4R7M | ELECTRO 4.7UF 35WV | | |
| C120 | | | CE04KW1E221M | ELECTRO 220UF 25WV | | |
| C126 | | | CE04KW1V100M | ELECTRO 10UF 35WV | | |
| C201,202 | | | CF92FV1H822J | MF 8200PF J | | |
| C203,204 | | | CE04KW1H010M | ELECTRO 1.0UF 50WV | | |
| C205,206 | | | CE04KW1V100M | ELECTRO 10UF 35WV | | |
| C207,208 | | | CC45FSL1H220J | CERAMIC 22PF J | | |
| C209,210 | | | CF92FV1H473J | MF 0.047UF J | | |
| C211,212 | | | CE04KW1V100M | ELECTRO 10UF 35WV | | |
| C213,214 | | | CK45FB1H681K | CERAMIC 680PF K | | |
| C215,216 | | | CK45FB1H561K | CERAMIC 560PF K | | |
| C217,218 | | | CF92FV1H392J | MF 3900PF J | | |
| C219,220 | | | CF92FV1H332J | MF 3300PF J | | |
| C221,222 | | | CF92FV1H392J | MF 3900PF J | | |
| C223,224 | | | CF92FV1H102J | MF 1000PF J | | |
| C225,226 | | | CF92FV1H242J | MF 2400PF J | | |
| C227,228 | | | CF92FV1H681J | MF 680PF J | | |
| C229 | | | CE04KW1V100M | ELECTRO 10UF 35WV | | |
| C230 | | | CE04KW1C101M | ELECTRO 100UF 16WV | | |
| C231 | | | CE04HW1H2R2M | NP-ELEC 2.2UF 50WV | | |
| C233,234 | | | CC45FSL2H221J | CERAMIC 220PF J | | |
| C301,302 | | | C91-1434-05 | FILM 150PF J | | |
| C303,304 | | | C91-1436-05 | FILM 220PF J | | |
| C305,306 | | | CK45FB1H561K | CERAMIC 560PF K | | |
| C307,308 | | | CF92FV1H103J | MF 0.010UF J | | |
| C309,310 | | | CF92FV1H153J | MF 0.015UF J | | |
| C311,312 | | | CF92FV1H223J | MF 0.022UF J | | |
| C313,314 | | | CE04KW1V100M | ELECTRO 10UF 35WV | | |

L:Scandinavia K:USA P:Canada
Y:PX(Far East, Hawaii) T:England E:Europe
Y:AAFES(Europe) X:Australia M:Other Areas

⚠ indicates safety critical components.

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| Ref. No. 参照番号 | Address 位置 | New Parts 新 | Parts No. 部品番号 | Description 部品名／規格 | Destination 仕向 | Remarks 備考 |
|---|---|---|---|---|---|---|
| C315 | | | CK45FF1H103Z | CERAMIC 0.010UF Z | | |
| C316 | | | CQ93HP2A682J | MYLAR 6800PF J | | |
| C317,318 | | | CE04KW1V100M | ELECTR® 10UF 35WV | | |
| C319 | | | CC45FSL2H100D | CERAMIC 10PF D | | |
| C320 | | | CF92FV1H153J | MF 0.015UF J | | |
| C321,322 | | | CF92FV1H472J | MF 4700PF J | | |
| C323 | | | CF92FV1H682J | MF 6800PF J | | |
| C324 | | | CE04KW1H010M | ELECTR® 1.0UF 50WV | | |
| C325 | | | CE04KW1C470M | ELECTR® 47UF 16WV | | |
| C326 | | | CE04KW1H2R2M | ELECTR® 2.2UF 50WV | | |
| C401,402 | | | CF92FV1H471J | MF 470PF J | | |
| C403,404 | | | CF92FV1H394J | MF 0.39UF J | | |
| C405 | | | CE04KW1C101M | ELECTR® 100UF 16WV | | |
| C406 | | | CE04HW1E4R7M | NP-ELEC 4.7UF 25WV | | |
| C501,502 | | | CC45FSL1H221J | CERAMIC 220PF J | | |
| C503,504 | | | CK45FF1H103Z | CERAMIC 0.010UF Z | | |
| C505 | | | CE04KW1C220M | ELECTR® 22UF 16WV | | |
| C506,507 | | | CK45FF1H103Z | CERAMIC 0.010UF Z | | |
| C508 | | | CC45FSL1H101J | CERAMIC 100PF J | | |
| C509 | | | CK45FF1H103Z | CERAMIC 0.010UF Z | | |
| C701 | | | CE04KW1V222M | ELECTR® 2200UF 35WV | | |
| C702 | | | C90-1872-05 | ELECTR® 10000UF 25WV | | |
| C703 | | | CE04KW1H471M | ELECTR® 470UF 50WV | | |
| ⚠ C704 | | | C91-1439-05 | FILM 0.01UF 250VAC | | |
| C705,706 | | | CK45FF1H103Z | CERAMIC 0.010UF Z | | |
| C707 | | | CE04KW1V470M | ELECTR® 47UF 35WV | | |
| C708,709 | | | CF92FV1H104J | MF 0.10UF J | | |
| C710 | | | CE04KW1V100M | ELECTR® 10UF 35WV | | |
| C711 | | | CF92FV1H103J | MF 0.010UF J | | |
| C712 | | | CF92FV1H104J | MF 0.10UF J | | |
| C713 | | | CE04KW1C101M | ELECTR® 100UF 16WV | | |
| C714 | | | CE04KW0J471M | ELECTR® 470UF 6.3WV | | |
| C715 | | | CE04KW1V100M | ELECTR® 10UF 35WV | | |
| C716 | | | CK45FF1H103Z | CERAMIC 0.010UF Z | | |
| C717 | | | CE04KW1V330M | ELECTR® 33UF 35WV | | |
| C718 | | | C91-0700-05 | CERAMIC 0.1UF J | | |
| C719 | | | CE04KW1V100M | ELECTR® 10UF 35WV | | |
| C720 | | | CK45FB1H102K | CERAMIC 1000PF K | | |
| C721 | | | CE04KW1A101M | ELECTR® 100UF 10WV | | 3 |
| C722 | | | CE04HW1H2R2M | NP-ELEC 2.2UF 50WV | | 5 |
| C723 | | | CF92FV1H104J | MF 0.10UF J | | 5 |
| C724 | | | CF92FV1H302J | MF 3000PF J | | |
| C731 | | | C91-0700-05 | CERAMIC 0.1UF J | | 5 |
| C732,733 | | | CE04KW1A470M | ELECTR® 47UF 10WV | | |
| C735-738 | | | CC45FSL1H221J | CERAMIC 220PF J | | |
| C740 | | | CK45FB1H102K | CERAMIC 1000PF K | | |
| C741 | | | CK45FB1H102K | CERAMIC 1000PF K | | 5 |
| C742 | | | CE04KW1V4R7M | ELECTR® 4.7UF 35WV | | 5 |
| C801,802 | | | CE04KW1H010M | ELECTR® 1.0UF 50WV | | |
| C803,804 | | | CC45FSL1H101J | CERAMIC 100PF J | | |
| C805,806 | | | CE04KW1C470M | ELECTR® 47UF 16WV | | |
| C813 | | | CE04KW1V100M | ELECTR® 10UF 35WV | | |
| C814 | | | CE04KW1C101M | ELECTR® 100UF 16WV | | |
| C815 | | | CK45FF1H103Z | CERAMIC 0.010UF Z | | |
| C816 | | | CE04KW1H010M | ELECTR® 1.0UF 50WV | | |

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|---|---|---|---|---|---|---|
| C901 | | | CE04KW1V4R7M | ELECTR® 4.7UF 35WV | | |
| C902 | | | CK45FB1H102K | CERAMIC 1000PF K | | |
| C903 | | | CE04KW1H010M | ELECTR® 1.0UF 50WV | | |
| C904 | | | C90-1826-05 | BACKUP 0.047F 5.5WV | | |
| C949,950 | | | CE04KW1V100M | ELECTR® 10UF 35WV | | |
| C951,952 | | | CE04KW1HR33M | ELECTR® 0.33UF 50WV | | |
| C953,954 | | | CF92FV1H332J | MF 3300PF J | | |
| C956 | | | CK45FB1H561K | CERAMIC 560PF K | | 5 |
| C957,958 | | | CE04KW1V4R7M | ELECTR® 4.7UF 35WV | | |
| C959 | | | CE04KW1V100M | ELECTR® 10UF 35WV | | |
| C960 | | | CE04KW1H010M | ELECTR® 1.0UF 50WV | | 5 |
| C961,962 | | | CE04KW1V100M | ELECTR® 10UF 35WV | | |
| C964-966 | | | CK45FF1H103Z | CERAMIC 0.010UF Z | | |
| ⚠ C967 | | | C91-1439-05 | FILM 0.01UF 250VAC | M | |
| ⚠ CN71 | 1F | | E40-4165-05 | FLAT CABLE CONNCTOR | | |
| J3 | 1E | | E03-0102-25 | AC INLET | M | |
| J41 | | | E13-0445-05 | PHONO JACK(4P) REC IN,PLAY OUT | | |
| J51 | | | E11-0188-05 | MINIATURE PHONE JACK SYNCRO | | |
| J81 | | | E11-0208-05 | PHONE JACK HARD PHONE | | |
| - | | | J11-0098-05 | WIRE CLAMPER | | |
| L11 ,12 | | | L79-0720-05 | LC FILTER | | |
| L21 ,22 | | | L40-2235-29 | SMALL FIXED INDUCTOR(22MH ,J) | | |
| L23 ,24 | | | L40-1035-29 | SMALL FIXED INDUCTOR(10MH, J) | | |
| L31 ,32 | | | L32-0547-05 | BIAS OSCILATING COIL | | |
| L33 | | | L32-0533-05 | BIAS OSCILATING COIL | | |
| X1 | | | L78-0290-05 | RESONATOR 8.00MHz | | |
| CP1 | | | R90-0487-05 | MULTI-COMP 47KX4 J 1/6W | | |
| CP2 | | | R90-0804-05 | MULTI-COMP 47KX8 J 1/4W | | 5 |
| R22 | | | RD14NB2E221J | RD 220 J 1/4W | | |
| R129 | | | RD14GB2E100J | FL-PROOF RD 10 J 1/4W | | |
| R243 | | | RD14NB2E101J | RD 100 J 1/4W | | |
| R320,321 | | | R92-0219-05 | FUSE RESIST 10 G 1/4W | | |
| R324,325 | | | RD14NB2E220J | RD 22 J 1/4W | | |
| R326 | | | RD14NB2E102J | RD 1.0K J 1/4W | | |
| R704 | | | RD14GB2E102J | FL-PROOF RD 1.0K J 1/4W | | |
| R705 | | | RS14KB3D221J | FL-PROOF RS 220 J 2W | | |
| R706 | | | RD14GB2E222J | FL-PROOF RD 2.2K J 1/4W | | |
| R759 | | | RD14GB2E122J | FL-PROOF RD 1.2K J 1/4W | | 5 |
| R764 | | | RS14KB3A332J | FL-PROOF RS 3.3K J 1W | | 5 |
| R823 | | | RD14GB2E221J | FL-PROOF RD 220 J 1/4W | | |
| R972 | | | RD14NB2E101J | RD 100 J 1/4W | | |
| R980,981 | | | RS14KB3A4R7J | FL-PROOF RS 4.7 J 1W | | 3 |
| VR1 ,2 | | | R12-3686-05 | TRIMMING POT.(22K) PB LEVEL | | |
| VR21,22 | | | R12-3686-05 | TRIMMING POT.(22K) REC LEVEL | | |
| VR31,32 | | | R12-5651-05 | TRIMMING POT.(100K) BIAS | | |
| VR95 | | | R12-1619-05 | TRIMMING POT.(4.7K) METER | | |
| VR101 | | | R06-4085-05 | POTENTIOMETER REC LEVEL | | |
| VR102 | | | R05-5035-05 | POTENTIOMETER(200K) BALANCE | | |
| K1 | | | S51-2089-05 | MAGNETIC RELAY | | |
| S101 | | | S31-1017-05 | SLIDE SWITCH TIMER SW | | |
| S724-730 | | | S40-1064-05 | PUSH SWITCH KEY BOARD | | |
| S732-735 | | | S40-1064-05 | PUSH SWITCH KEY BOARD | | |
| S737 | | | S40-1064-05 | PUSH SWITCH KEY BOARD | | |

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|---|---|---|---|---|---|---|
| S738-741 | | | S40-1064-05 | PUSH SWITCH KEY BOARD | | 5 |
| S743 | | | S40-1064-05 | PUSH SWITCH POWER | | |
| D1 | | | HSS104 | DIODE | | |
| D1 | | | 1SS133 | DIODE | | |
| D2 | | | HZS11N(B2) | ZENER DIODE | | |
| D2 | | | RD11ES(B2) | ZENER DIODE | | |
| D3 | | | HSS104 | DIODE | | |
| D3 | | | 1SS133 | DIODE | | |
| D15 -18 | | | HSS104 | DIODE | | |
| D15 -18 | | | 1SS133 | DIODE | | |
| D20 ,21 | | | HSS104 | DIODE | | |
| D20 ,21 | | | 1SS133 | DIODE | | |
| D31 | | | HSS104 | DIODE | | |
| D31 | | | 1SS133 | DIODE | | |
| D40 | | | HZS6.2N(B2) | ZENER DIODE | | 3 |
| D40 | | | HZS7.5S(B) | ZENER DIODE | | 5 |
| D40 | | | RD6.2ES(B2) | ZENER DIODE | | 3 |
| D40 | | | RD7.5JS(B) | ZENER DIODE | | 5 |
| D51 -58 | | | HSS104 | DIODE | | |
| D51 -58 | | | 1SS133 | DIODE | | |
| D91 -93 | | | HSS104 | DIODE | | |
| D91 -93 | | | 1SS133 | DIODE | | |
| D701-704 | | | S5688B | DIODE | | |
| D701-704 | | | 1SR139-100 | DIODE | | |
| D705 | | | KBP02ML-6127 | DIODE | | |
| D706 | | | S5688B | DIODE | | |
| D706 | | | 1SR139-100 | DIODE | | |
| D707 | | | HZS5.1S(B) | ZENER DIODE | | |
| D707 | | | RD5.1JS(B) | ZENER DIODE | | |
| D708 | | | HSS104 | DIODE | | |
| D708 | | | 1SS133 | DIODE | | |
| D709 | | | HZS3.9N(B) | ZENER DIODE | | |
| D709 | | | RD3.9ES(B) | ZENER DIODE | | |
| D710-712 | | | HSS104 | DIODE | | |
| D710-712 | | | 1SS133 | DIODE | | |
| D713 | | | S5688B | DIODE | | |
| D713 | | | 1SR139-100 | DIODE | | |
| D714-717 | | | HSS104A | DIODE | | |
| D714-717 | | | 1SS131 | DIODE | | |
| D719,720 | | | HSS104A | DIODE | | |
| D719,720 | | | 1SS131 | DIODE | | |
| D724-730 | | | HSS104A | DIODE | | |
| D724-730 | | | 1SS131 | DIODE | | |
| D732-735 | | | HSS104A | DIODE | | |
| D732-735 | | | 1SS131 | DIODE | | |
| D737 | | | HSS104A | DIODE | | |
| D737 | | | 1SS131 | DIODE | | |
| D738-741 | | | HSS104A | DIODE | | 5 |
| D738-741 | | | 1SS131 | DIODE | | 5 |
| D743,744 | | | HSS104A | DIODE | | |
| D743,744 | | | 1SS131 | DIODE | | |
| D745 | | | HSS104 | DIODE | | 5 |
| D745 | | | 1SS133 | DIODE | | 5 |
| D746,747 | | | HSS104 | DIODE | | |

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|---|---|---|---|---|---|---|
| D746,747 | | | 1SS133 | DIODE | | |
| D749 | | | HSS104A | DIODE | | |
| D749 | | | 1SS131 | DIODE | | |
| D751 | | | HSS104A | DIODE | | |
| D751 | | | 1SS131 | DIODE | | |
| D752 | | | HZS8.2S(B2) | ZENER DIODE | | 5 |
| D752 | | | RD8.2JS(B2) | ZENER DIODE | | 5 |
| D753 | | | HSS104 | DIODE | | 5 |
| D753 | | | 1SS133 | DIODE | | 5 |
| D754 | | | HSS104A | DIODE | | 5 |
| D754 | | | 1SS131 | DIODE | | 5 |
| D755 | | | HZS8.2S(B2) | ZENER DIODE | | 5 |
| D755 | | | RD8.2JS(B2) | ZENER DIODE | | 5 |
| D756-759 | | | HSS104 | DIODE | | |
| D756-759 | | | 1SS133 | DIODE | | |
| ED1 | | * | CM1156C | INDICATOR TUBE | | 3 |
| ED1 | | * | CM1157C | INDICATOR TUBE | | 5 |
| IC1 | | | TA8125S | IC(2CH PRE AMP) | | |
| IC11 | | | HA12170NT | IC(DOLBY B/C NR) | | |
| IC21 | | | NJM4565D-D | IC(OP AMP X2) | | |
| IC31 | | | UPC1297CA | IC(DOL HX PRO SYSTEM) | | |
| IC41 | | | BA17815T | IC(VOLTAGE REGULATOR) | | |
| IC41 | | | UPC7815AHF | IC(VOLTAGE REGULATOR/+15V) | | |
| IC51 | | | NJU7313L | IC(ANALOG SWITCH) | | |
| IC51 | | | TC9164N | IC(16CH BILATERAL SELECTOR SW) | | |
| IC81 | | | NJM4565L | IC(OP AMP X2) | | |
| IC81 | | | RC4565L | IC(OP AMP X2) | | |
| IC95 | | | NJM4565D-D | IC(OP AMP X2) | | |
| IC96 | | | BA6138 | IC(ROOT AMP X2) | | |
| IC701 | | | BA17812T | IC(VOLTAGE REGULATOR/ +12V) | | |
| IC701 | | | UPC7812AHF | IC(VOLTAGE REGULATOR/ +12V) | | |
| IC702 | | | BA17805T | IC(VOLTAGE REGULATOR/ +5V) | | |
| IC702 | | | UPC7805AHF | IC(VOLTAGE REGULATOR/ +5V) | | |
| IC705 | | | CXP82320-114Q | IC(8BIT MICROPROCESSOR) | | |
| IC706 | | | TC4053BP | IC(3-INPUT 2CH MPX/DE-MPX) | | 5 |
| IC706 | | | XRU4053B | IC(ANALOG MULTIPLEXER/DEMULTIP | | 5 |
| IC708 | | | M51951ASL | IC(SYSTEM RESET) | | |
| IC708 | | | PST529D | IC(SYSTEM RESET) | | |
| Q1 -5 | | | 2SC2458(Y,GR) | TRANSISTOR | | |
| Q1 -5 | | | 2SC3311A(Q,R) | TRANSISTOR | | |
| Q6 | | | DTA143TS | DIGITAL TRANSISTOR | | |
| Q6 | | | UN4116 | DIGITAL TRANSISTOR | | |
| Q21 ,22 | | | 2SC2878(B) | TRANSISTOR | | |
| Q21 ,22 | | | 2SD1302(S,T) | TRANSISTOR | | |
| Q23 -28 | | | 2SC2458(Y,GR) | TRANSISTOR | | |
| Q23 -28 | | | 2SC3311A(Q,R) | TRANSISTOR | | |
| Q31 ,32 | | | 2SC3311A(Q,R) | TRANSISTOR | | |
| Q33 | | | 2SC3940A(R,S) | TRANSISTOR | | |
| Q34 ,35 | | | DTC113ZS | DIGITAL TRANSISTOR | | |
| Q34 ,35 | | | UN4219 | DIGITAL TRANSISTOR | | |
| Q41 -44 | | | 2SC3311A(Q,R) | TRANSISTOR | | |
| Q51 | | | DTC124ES | DIGITAL TRANSISTOR | | |
| Q51 | | | UN4212 | DIGITAL TRANSISTOR | | |
| Q81 ,82 | | | 2SC2878(B) | TRANSISTOR | | 3 |
| Q81 ,82 | | | 2SD1302(S,T) | TRANSISTOR | | 3 |

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|---|---|---|---|---|---|---|
| Q92 | | | 2SC2458(Y,GR) | TRANSISTOR | | |
| Q92 | | | 2SC3311A(Q,R) | TRANSISTOR | | |
| Q95 ,96 | | | 2SC2458(Y,GR) | TRANSISTOR | | |
| Q95 ,96 | | | 2SC3311A(Q,R) | TRANSISTOR | | |
| Q97 | | | 2SC2458(Y,GR) | TRANSISTOR | | 5 |
| Q97 | | | 2SC3311A(Q,R) | TRANSISTOR | | 5 |
| Q701 | | | 2SA1048(Y,GR) | TRANSISTOR | | |
| Q701 | | | 2SA1309A(Q,R) | TRANSISTOR | | |
| Q702 | | | 2SB1370 | TRANSISTOR | | |
| Q702 | | | 2SB1375 | TRANSISTOR | | |
| Q703-705 | | | 2SA1048(Y,GR) | TRANSISTOR | | |
| Q703-705 | | | 2SA1309A(Q,R) | TRANSISTOR | | |
| Q706 | | | 2SA1048(Y,GR) | TRANSISTOR | | 5 |
| Q706 | | | 2SA1309A(Q,R) | TRANSISTOR | | 5 |
| Q707 | | | DTC143TS | DIGITAL TRANSISTOR | | 5 |
| Q707 | | | UN4216 | DIGITAL TRANSISTOR | | 5 |
| Q708 | | | DTA143TS | DIGITAL TRANSISTOR | | 5 |
| Q708 | | | UN4116 | DIGITAL TRANSISTOR | | 5 |
| Q710,711 | | | DTC113ZS | DIGITAL TRANSISTOR | | |
| Q710,711 | | | UN4219 | DIGITAL TRANSISTOR | | |
| Q712 | | | DTC113ZS | DIGITAL TRANSISTOR | | 5 |
| Q712 | | | UN4219 | DIGITAL TRANSISTOR | | 5 |
| Q713 | | | DTC124ES | DIGITAL TRANSISTOR | | |
| Q713 | | | UN4212 | DIGITAL TRANSISTOR | | |
| **CONTROL UNIT (X29-2352-XX)** | | | | | | |
| C1 | | | CK45FF1H103Z | CERAMIC 0.010UF Z | | |
| C2 | | | C91-0700-05 | CERAMIC 0.1UF J | | |
| C3 | | | CK45FF1H103Z | CERAMIC 0.010UF Z | | |
| C4 | | | C91-0700-05 | CERAMIC 0.1UF J | | |
| C5 | | | CE04KW1H3R3M | ELECTRO 3.3UF 50WV | | |
| C11 ,12 | | | CK45FF1H103Z | CERAMIC 0.010UF Z | | |
| C13 | | | CE04KW1V100M | ELECTRO 10UF 35WV | | |
| C14 ,15 | | | CK45FF1H103Z | CERAMIC 0.010UF Z | | |
| C16 | | | CK45FF1H103Z | CERAMIC 0.010UF Z | | 5 |
| C17 | | | CE04KW1V100M | ELECTRO 10UF 35WV | | |
| C18 | | | CK45FF1H103Z | CERAMIC 0.010UF Z | | |
| CN1 | 1E | | E40-4165-05 | FLAT CABLE CONNCTOR | | |
| - | | | J11-0098-05 | WIRE CLAMPER | | |
| IC1 | | | BA6209 | IC(MOTOR DRIVER) | | |
| IC2 | | | BA6229 | IC(MOTOR DRIVER) | | |
| IC3 ,4 | | | BA10393N | IC(DUAL COMPARATOR) | | |
| Q1 ,2 | | | DTC113ZS | DIGITAL TRANSISTOR | | |
| Q1 ,2 | | | UN4219 | DIGITAL TRANSISTOR | | |
| Q3 | | | 2SC3246 | TRANSISTOR | | |
| **MECHANISM UNIT (D40-123XX-XX)** | | | | | | |
| 301 | 2A | * | A10-2990-08 | HEAD CHASSIS CALKED ASSY | | |
| 302 | 1B | * | A11-0769-08 | BASE CHASSIS ASSY | | |
| 305 | 2C | * | D01-0147-08 | FLYWHEEL ASSY | | |
| 307 | 1B | * | D10-3290-08 | BRAKE ARM | | |
| 308 | 1A | * | D10-3292-08 | EJECT LEVER | | |
| 309 | 1A | * | D10-3323-08 | FRICTION ARM ASSY | | |
| 310 | 2B | * | D12-0143-08 | PLAY CAM GEAR | | |

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|---|---|---|---|---|---|---|
| 311 | 1A | * | D12-0144-08 | LOADING CAM GEAR | | |
| 312 | 1C | * | D12-0145-08 | UNIT HOLDER | | |
| 315 | 2B | * | D13-1503-08 | EXTENTION GEAR A | | |
| 316 | 2B | * | D13-1504-08 | EXTENTION GEAR B | | |
| 317 | 1B | * | D13-1505-08 | SELECT GEAR | | |
| 318 | 1B,2B | * | D13-1506-08 | REEL GEAR | | |
| 319 | 1A | * | D13-1507-08 | IDLE GEAR | | |
| 321 | 1A | * | D13-1509-08 | HOLDER GEAR A | | |
| 322 | 1A | * | D13-1510-08 | HOLDER GEAR B | | |
| 325 | 2C | * | D15-0335-08 | PULLEY GEAR (MB) | | |
| 326 | 1B | * | D15-0336-08 | PULLEY (LA) | | |
| 328 | 1A | * | D15-0339-08 | PULLEY GEAR | | |
| 330 | 2B | | D19-0270-18 | REEL CAP | | |
| 332 | 2B | * | D23-0278-08 | HOUSING ASSY | | |
| 335 | 1C | * | E30-2727-08 | MOTOR WIRE 10P | | |
| 336 | 2A | * | E35-0575-08 | HEAD WIRE 7P REC/PLAY | | |
| 337 | 2A | * | E35-0576-08 | HEAD WIRE 2P ERASE | | |
| 338 | 1C | * | E35-0577-08 | FLAT WIRE 12P | | |
| 340 | 2A | | G01-3530-08 | AZIMUTH SPRING | | |
| 341 | 1B | * | G01-3521-08 | PULLEY GEAR SPRING | | |
| 342 | 1B | * | G01-3522-08 | BRAKE ARM SPRING | | |
| 343 | 2B | * | G01-3523-08 | REEL SPRING | | |
| 344 | 1B,2B | * | G01-3524-08 | BACK TENTION SPRING | | |
| 345 | 2A | * | G01-3525-08 | PINCH ROLLER SPRING | | |
| 346 | 2A | * | G01-3527-08 | HEAD SHASSIS SPRING | | |
| 347 | 1A | * | G01-3528-08 | EJECT LEVER SPRING | | |
| 348 | 2C | * | G01-3529-08 | EARTH SPRING | | |
| 350 | 1A | * | G02-1006-08 | FRICTION SPRING | | |
| 352 | 2B | * | G16-0790-08 | MODE REFLECTOR | | |
| 353 | 1B,2B | * | G16-0791-08 | REFLECTOR SEAL | | |
| 355 | 1A | * | J19-3521-08 | LOADING HOLDER ASSY | | |
| 357 | 1C | * | J19-3550-08 | LEAD HOLDER | | |
| 358 | 2A | * | J30-0292-08 | HEAD SPACER | | |
| 359 | 1B | * | J31-0853-08 | EJECT LEVER COLLAR RIGHT | | |
| 360 | 1A | * | J31-0854-08 | EJECT LEVER COLLAR LEFT | | |
| 361 | 2A | * | J31-0855-08 | HEAD COLLAR | | |
| 362 | 2A | * | J39-0172-08 | HEAD BASE | | |
| 363 | 1B,2B | * | J42-0191-08 | REEL BUSH | | |
| 364 | 1A | * | J60-0022-08 | ACETATE TAPE 9X20 | | |
| 365 | 1C | * | J61-0095-08 | WIRE CLAMPER | | |
| 366 | 1B | * | J70-0320-08 | MECHANISM CONTROL PCB | | |
| 368 | 2A | * | J90-0695-08 | CASSETTE GUIDE (B) | | |
| 370 | 2A | | N09-1497-08 | SCREW M2X5 | | |
| 371 | 1C,2B | | N09-2871-08 | SCREW M2X6 | | |
| 372 | 1A,2A | | N09-2872-08 | SCREW M1.7X8 | | |
| 373 | 1A | | N09-2877-08 | SCREW M2X4 | | |
| 374 | 2A | * | N09-2962-08 | SCREW M2.6X6 | | |
| 375 | 1B | * | N09-2963-08 | SCREW M2X6 | | |
| 376 | 2A | * | N09-2964-08 | SCREW M2X9 | | |
| 377 | 2A | * | N09-2965-08 | SCREW M2X9 | | |
| 378 | 1A | * | N09-2966-08 | SCREW M2X9 | | |
| 380 | 1A,2C | | N19-1031-08 | FLAT WASHER ø1.6X3.5X0.5 | | |
| 381 | 1A,2A | | N19-1295-08 | FLAT WASHER ø2.1X5.0X0.5 | | |
| 382 | 2C | * | N19-1321-08 | FLAT WASHER ø2.6X6.0X0.25 | | |
| 383 | 1B,2B | * | N19-1322-08 | FLAT WASHER ø2.1X4.0X0.25 | | |

L:Scandinavia K:USA P:Canada
Y:PX(Far East, Hawaii) T:England E:Europe
Y:AAFES(Europe) X:Australia M:Other Areas

⚠ indicates safety critical components.

# PARTS LIST

* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

| Ref. No. 参照番号 | Address 位置 | New Parts 新 | Parts No. 部品番号 | Description 部品名／規格 | Destination 仕向 | Remarks 備考 |
|---|---|---|---|---|---|---|
| 385 | 1A | | N29-0206-04 | E RING ø2.0 | | |
| 387 | 1B | | N30-2604-46 | PAN HEAD SCREW M2.6X4 | | |
| 390 | 1A,2A | | S74-0011-08 | SWITCH OPEN/CLOSE | | |
| 391 | 1B,1C | * | S74-0016-08 | LEAF SWITCH | | |
| BA | 2C | * | D16-0341-08 | ASSYST BELT | | |
| BM | 2C | * | D16-0342-08 | MAIN BELT | | |
| BR | 1A | * | D16-0340-08 | REEL BELT | | |
| PF | 2A | * | D14-0345-08 | PINCH ROLLER ASSY | | |
| EH | 2A | * | T32-0326-08 | ERACE HEAD | | |
| RPH | 2A | * | T34-0344-08 | REC/PLAY HEAD | | |
| AM | 1C | * | T42-0630-08 | ASSYST MOTOR ASSY | | |
| MM | 1C | * | T42-0628-08 | MAIN MOTOR ASSY | | |
| RM | 1C | * | T42-0629-08 | REEL MOTOR ASSY | | |
| PHA | 1C | * | T95-0125-08 | PHOTO INTERRUPTER (SG107LF) | | |
| PHB | 1C | * | T95-0125-08 | PHOTO INTERRUPTER (SG107LF) | | |
| PHS | 1C | * | T95-0125-08 | PHOTO INTERRUPTER (SG107LF) | | 5 |
| PHT | 1C | * | T95-0125-08 | PHOTO INTERRUPTER (SG107LF) | | |

L:Scandinavia K:USA P:Canada 3: KX-3050
Y:PX(Far East, Hawaii) T:England E:Europe 5: KX-5050
Y:AAFES(Europe) X:Australia M:Other Areas

⚠ indicates safety critical components.



KX-3050/5050

# SPECIFICATIONS

## KX-3050

Track system ..... 4 track, 2 channel stereo
Recording system ..... AC bias (Frequency: 105 kHz)
Heads..... Playback/recording head ..... 1
Erasing head ..... 1
Motors ..... DC motor × 3
Wow and Flutter..... ±0.1% (IEC)
±0.14% (DIN)
0.05% (W.RMS)
Fast winding time ..... Approx. 85 seconds (C-60 tape)
Frequency response
Normal tape ..... 20 Hz to 17,000 Hz, ±3 dB
$CrO_2$ tape..... 20 Hz to 18,000 Hz, ±3 dB
Metal tape ..... 20 Hz to 19,000 Hz, ±3 dB
Signal to noise ratio
Dolby NR OFF ..... 57 dB
(IEC, 250 nWb/m, Metal tape)

Dolby NR OFF ..... 58 dB
Dolby B NR ON ..... 67 dB
Dolby C NR ON ..... 73 dB
(3rd H.D. 3%, Metal tape)
Harmonic distortion..... Less than 1.9%
(at 315 Hz, 3rd H.D., 250 nWb/m Metal tape)

Input sensitivity/Impedance
LINE IN..... 100 mV/47 kΩ
Output level/impedance
LINE OUT ..... 775 mV/1 kΩ
Headphones ..... 0.75 mW/8 Ω

[General]
Power Consumption..... 22 W
Dimensions ..... W: 440 mm (17-5/16")
H : 127 mm (5")
D : 277 mm (10-7/8")
Weight (Net) ..... 4.4 kg (9.7 lb)

## KX-5050

Track system ..... 4 track, 2 channel stereo
Recording system ..... AC bias (Frequency: 105 kHz)
Heads..... Playback/recording head ..... 1
Erasing head ..... 1
Motors ..... DC motor × 3
Wow and flutter ..... ±0.1% (IEC)
±0.14% (DIN)
0.05% (W.RMS)
Fast winding time ..... Approx. 85 seconds (C-60 tape)
Frequency response
Normal tape ..... 20 Hz to 17,000 Hz, ±3 dB
$CrO_2$ tape..... 20 Hz to 18,000 Hz, ±3 dB
Metal tape ..... 20 Hz to 19,000 Hz, ±3 dB
Signal to noise ratio
Dolby NR OFF ..... 57 dB
(IEC, 250nWb/m, Metal tape)

Dolby NR OFF ..... 58 dB
Dolby B NR ON ..... 67 dB
Dolby C NR ON ..... 73 dB
(3rd, H.D., 3%, Metal tape)
Harmonic distortion..... Less than 1.9%
(at 315 Hz, 3rd H.D., 250 nWb/m Metal tape)

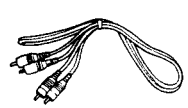
Input sensitivity/Impedance
LINE IN..... 100 mV/47 kΩ
Output level/impedance
LINE OUT ..... 775 mV/1 kΩ
Headphones ..... 0.75 mW/8 Ω

[General]
Power consumption ..... 22 W
Dimensions ..... W: 440 mm (17-5/16")
H : 127 mm (5")
D : 277 mm (10-7/8")
Weight (Net) ..... 4.4 kg (9.7 lb)

Note:
KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

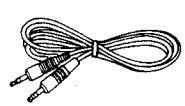
## Accessories

Audio cord ..... 2



(E30-0505-05)

System control cord..... 1

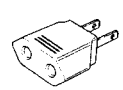


(E30-0977-05)

AC cord..... 1
(Except for some areas.)
(The shape may vary depending on the destination area.)

(E30-1329-15)

AC plug adaptor..... 1
(Except for some areas.)
For the unit with a European AC plug in areas other than Europe.



(E30-0115-05)

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